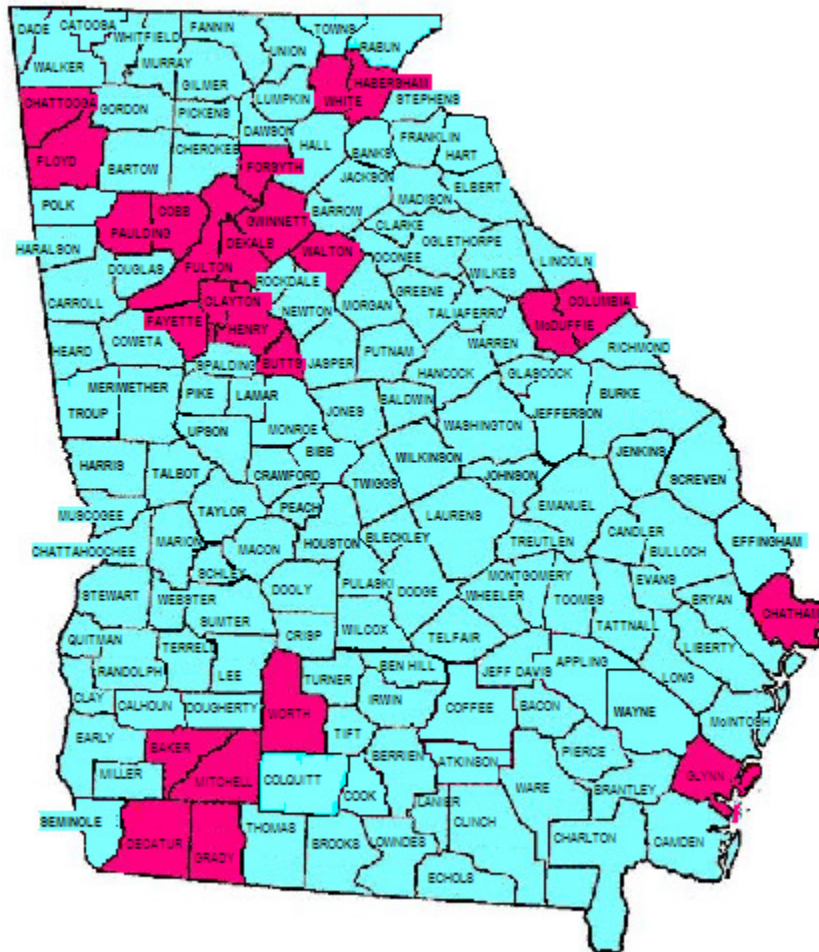


# WinGAP Commercial / Industrial Pricing and Schedules including Manufactured Housing and Urban Land

## Application, Development, and Maintenance



Revised October, 2010  
WinGAP Version 3.12.0 [60]

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## Introduction

The WinGAP commercial improvement valuation schedules are designed to allow the user to customize the valuation process of commercial/industrial buildings that are specific to the county in which the system is being used. Most counties in the state of Georgia lack the necessary sales activity to develop commercial/industrial schedules via market analysis. Thus, the emphasis in the system is on the cost approach. However, if substantial market or income data is available, the values in the schedules should be confirmed and adjusted accordingly.

Cost data, such as, base dollars per square foot, dollar per square foot adjustments for structural elements, extra feature values, etc. should be obtained from reliable sources. Sources considered as reliable would be contractors and/or nationally recognized and accepted cost manuals. Data found in manuals must be localized and adjusted for current time.

In an effort to create a pricing mechanism that is easier to understand, WinGAP displays the pricing schedule information for commercial improvements as actual dollars. Even though the relationship of points and point cost is still in effect, the association is transparent to the user. However, references to the points/point cost and base cost/value relationship will often be made in an effort to provide an understanding of the underlying calculations and the effect of modifying a component of the process.

The methodology used in the valuation of urban land follows the details in the Appraisal Procedures manual. Urban land is segregated into subdivisions with schedules designed to accommodate the various characteristics of each.

The development and maintenance of schedules for commercial improvements should be of primary concern to the county appraisal staff. While commercial improvements and associated land do not normally constitute a large number of properties in a county, it is important that the appraiser have an understanding of schedule functionality and the derivation of the values "plugged" into the tables.

The goals of this course are to:

- ❑ *Provide the appraiser with information regarding access to the various schedules in WinGAP*
- ❑ *Acquaint the appraiser with the use of the schedules through the manual calculation process*
- ❑ *Provide methodology for deriving a commercial improvement point cost*

Examples will be given on the use of the various procedures. Exercises will also be provided to provide the attendee an opportunity to practice the procedures.

**Note:** WinGAP's Commercial Improvement schedules can be set up to use either the Segregated Cost Method or Calculator Cost Method of valuing Commercial Improvements, depending upon the preference of the appraiser. Any and all schedule values are the responsibility of the county. The creation of the values and subsequent schedules should be supported with proper documentation.

# Commercial / Industrial Improvement Schedules

## Introduction

An understanding of the WINGAP valuation process for commercial / industrial buildings should facilitate the generation of the schedules for this property type. In the manual calculation procedures, the user will see how the various schedule components impact the end calculation of the structure's fair market value. The effect of schedule modifications should become more apparent after the user becomes familiar with the steps involved in the calculation process. Also, knowledge of the calculation procedures will assist the appraiser/assessor in communications with the taxpayer, providing additional information to assist in the answering of his/her questions about commercial/industrial structure values.

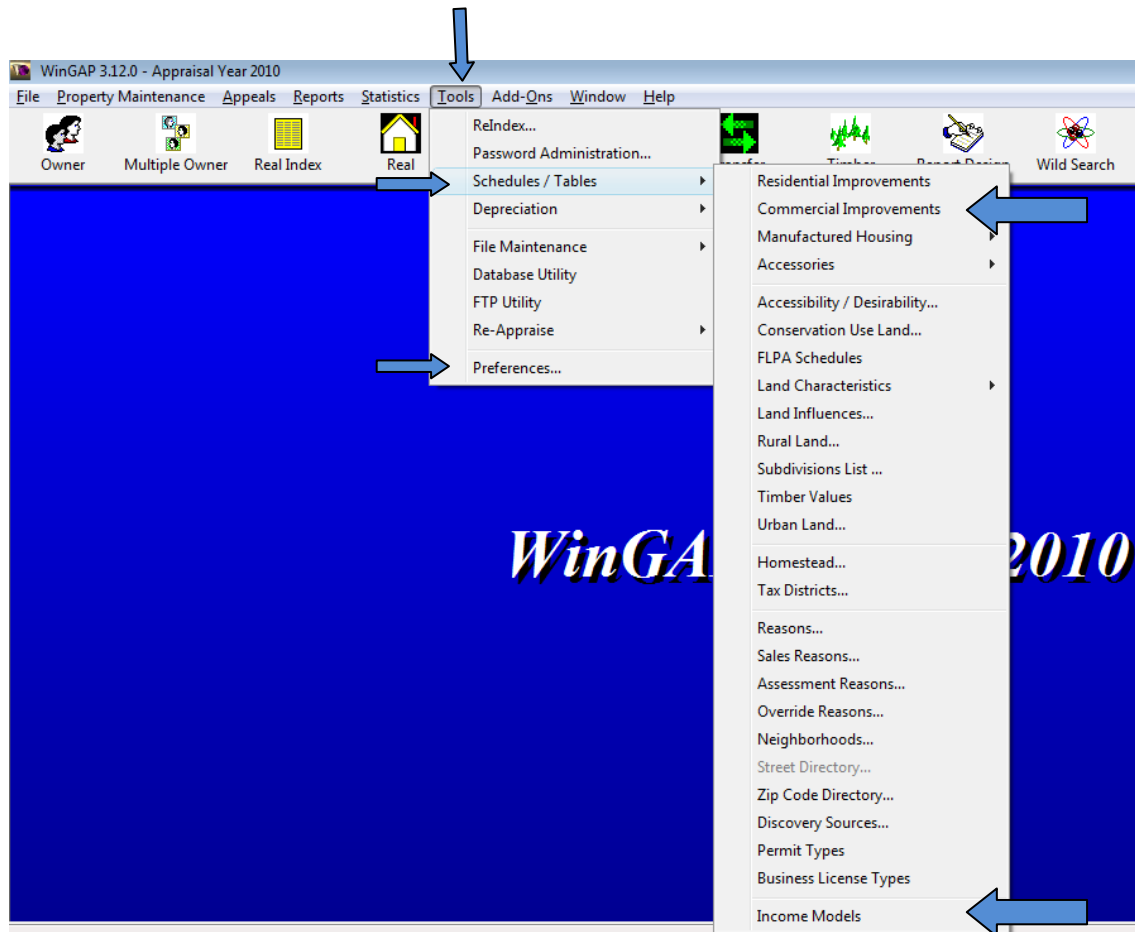
The Commercial Improvement Schedules are accessed by going to the **Tools Menu**, as shown on the next page. From this Menu the user can access the **three areas** where Commercial Improvement Schedules are located:

- The **Tools >> Schedules / Tables >> Commercial Improvements** Menu item should be selected to produce the Commercial Improvements Menu, shown at the bottom of the next page, where items such the Commercial Base Schedule, Commercial Structural Components, and Commercial Improvement Labels are located.
- The **Tools >> Preferences** Menu item should be selected to produce the Preferences Form, discussed later, where the Commercial Point Cost, Commercial Base Cost, and Commercial Depreciation Year are located.
- Finally, the **Tools >> Schedules / Tables >> Income Models** Menu item should be selected to open the Income Models Form, where pricing information for the Income approach to valuing Commercial Improvements is located.

The example on the next page shows the **Tools Menu** with all of its options and submenus; those that involve **Commercial Improvements** are indicated by arrows. Menu options can be chosen by clicking on the option or using the directional arrows to highlight the option and then pressing the Enter key.

Access to these tables and menu options will be restricted with the use of passwords and the assignment of rights to add or edit items contained within.

## Commercial Improvements Schedules Menu



## Preferences

### Base Cost, Depreciation Year, and Point Cost

The commercial improvement **Base Cost**, **Depreciation Year**, and **Point Cost** are the initial items that are needed to perform the calculation of a commercial/industrial building. These items can be found on the **Preferences** Form that is accessed from the WINGAP Main Menu via the Tools option. An example of the Preferences Form is shown below.

The screenshot shows the 'WinGAP - Preferences' window. It is divided into several sections: 'County Information', 'Point/Base Costs', 'Depreciation Years', 'Other Options', and a bottom section for 'Special District' and 'Appraisal Year'. Callouts point to specific fields: 'Point Cost for Commercial Improvements' points to the 'Commercial' field in the 'Point/Base Costs' table; 'Depreciation Year for Commercial Improvements' points to the 'Commercial' field in the 'Depreciation Years' table; 'Truncate Values is used to set truncation "on" for all properties including Commercial Improvements' points to the 'Truncate Values' checkbox in the 'Other Options' section; 'Base Cost for Commercial Improvements' points to the 'Commercial Base' field in the 'Point/Base Costs' table; and 'Appraisal Year used in determining default Year Built of imps' points to the 'Appraisal Year' dropdown menu.

**WinGAP - Preferences**

**County Information**

County Name: Jones  
Address: Jones County Government Center  
P O Box 1359  
City: Gray, GA 31032-  
Phone: (478)986-6300  
Fax: (478)986-6504  
Email: cotax@mti.net  
Web:

**Point/Base Costs**

Residential	100.00
Commercial	100.00
Commercial Base	1.00
Accessory	100.00

**Depreciation Years**

Residential	2001
Commercial	2001
MFG Housing	2001
Accessory	2001

**Other Options**

☐ Truncate Values  
☐ Disable Logins  
☒ bBrowser Cost Form  
☐ Lock System  
☐ Rnd Area Mult to 6 dec.  
☐ Attic: Use Max/Min Area

☒ Auto-Reasons (Real)  
☒ Auto-Reasons (Pers)  
☐ PT50R = LIVE DATA  
☐ COA Auto-Flag  
☐ Hide Comments  
☐ Bsmt: Use Max/Min Area

**Special District Description**

Special District: XXXX-XXX-XXXX-XXX  
Parcel Number Template: XXXX-XXX-XXXX-XXX  
Customize Lendor Label: Lendor  
Customize Occupancy Label: Occupancy  
Customize Fireplace Label: Fireplace / Misc

**Appraisal Year**

Appraisal Year: 2010  
Rural Acre Break: 30.00  
PU Eq Ratio %: 40.00  
Return Deadline: 04/01/2010  
Default Startup Directory: 2010  
Guest Startup Directory: 2009

**Freeport Information is now found in tax district table**

ABOS Default: Low  
Land Influences: Compound  
ABOS Yr: 2010  
NADA Yr: 2010

Help

The fields and controls on the **Preferences** Form that are relative to commercial improvements and discussed on the next page are:

- ☐ **Commercial Improvement Base Cost**
- ☐ **Commercial Improvement Depreciation Year**
- ☐ **Commercial Improvement Point Cost**
- ☐ **Appraisal Year**
- ☐ **Truncate Values**

The **Commercial Improvement Base Cost** field contains a dollar per square foot value that is used as the basis for the valuation of all commercial and industrial buildings and extra features that are priced by the square foot method. The value of each building and extra feature is based on a percentage of the base cost.

The **Commercial Improvement Depreciation Year** is the base year from which the system generated depreciation for Commercial and Industrial Improvements is calculated. The age of a Commercial or Industrial Improvement is determined by subtracting the year built or effective year built from the depreciation year. This locks depreciation in until the county decides to change it. Like residential improvements, any commercial structures with a year built greater than the depreciation year will be determined to have an effective age of ONE year.

The **Commercial Improvement Point Cost** field contains the value which converts points generated by WinGAP for LUMP SUM Commercial and Industrial Improvements and Extra Features into a dollar value. Like the Residential Point Cost, the Commercial Point Cost provides a means by which the county can localize property values for Lump Sum Commercial and Industrial Improvements and Extra Features. Arriving at the Commercial Point Cost for a particular county requires a study of sales and assistance with the study can be provided by DOR personnel.

### **Appraisal Year and Truncate Values**

The **Appraisal Year** is used in the determination of the default Year Built for new commercial improvements. During the entry of a new commercial improvement, the Year Built will default to a year that is one less than the Appraisal Year. In the case of the Appraisal Year of 2010 shown on the Preferences form on the previous page, a Year Built of 2009 (2010 – 1) would be assigned to each newly entered commercial improvement.

When **Truncate Values** is checked and the replacement cost new – depreciation is greater than 1000, a calculation will result in a value that is truncated to the nearest 100. If the replacement cost new – depreciation value (RCN-dep) is less than 1000, the fair market value is truncated to the nearest 10. Truncation is accomplished by dividing the RCN-dep value by 100 and not rounding the result. The resulting quotient is then multiplied by 100. In the following example, the RCN-dep value of 98,877 is truncated to 98,800:

1.  $98,877 / 100 = 988$
2.  $988 * 100 = 98,800$

All other commercial / industrial valuation items can be found on the **Tools** Menu under **Schedules / Tables >> Commercial Improvements** and **Schedules / Tables >> Income Models**. The commercial tables are various schedules that hold commercial and extra feature base information, commercial building types and associated add values, adjustments for wall height and perimeter, drawing id's with story height factors and income models. Each of these tables will be discussed on the following pages.



## Manufactured Housing Depreciation Year field and Land Influences combo box

Two other items on the Preferences Form that apply to other sections of this manual, Manufactured Housing and Urban Land, are discussed below and on the next page.

**WinGAP - Preferences**

**County Information**

County Name:  ☐ Exempt from Provisions of HB233 for this digest year

Address:

City / State / Zip:

Phone / Ext.:

Fax:  Email:  Web:

**Point/Base Costs**

Residential	100.00
Commercial	100.00
Commercial Base	1.00
Accessory	100.00

**Depreciation Years**

Residential	2001
Commercial	2001
MFG Housing	2001
Accessory	2001

**Other Options**

<input type="checkbox"/> Truncate Values	<input checked="" type="checkbox"/> Auto-Reasons (Real)
<input type="checkbox"/> Disable Logins	<input checked="" type="checkbox"/> Auto-Reasons (Pers)
<input checked="" type="checkbox"/> bBrowser Cost Form	<input type="checkbox"/> PT50R = LIVE DATA
<input type="checkbox"/> Lock System	<input type="checkbox"/> COA Auto-Flag
<input type="checkbox"/> Rnd Area Mult to 6 dec.	<input type="checkbox"/> Hide Comments
<input type="checkbox"/> Attr Use Max/Min Area	<input type="checkbox"/> Bsmt: Use Max/Min Area

Special District Description:

Parcel Number Template:

Customize Lendor Label:

Customize Occupancy Label:

Customize Fireplace Label:

Appraisal Year:

Rural Acre Break:

PU Eq Ratio %:

Return Deadline:

Default Startup:

Guest Startup:

*Freeport Information is now found in tax district schedule*

ABOS Default:  ABOS Yr: 2010

Land Influences:  NADA Yr: 2010

**Depreciation Year for Manufactured Housing**

Help Close

## Manufactured Housing Depreciation Year

**The Manufactured Housing Depreciation Year** is the base year from which the system generated depreciation for Manufactured Housing is calculated. The age of a Mobile Home is determined by subtracting the year built or effective year built from the depreciation year. This locks depreciation in until the county decides to change it. Like residential and commercial improvements, any Mobile Homes with a year built greater than the depreciation year will be determined to have an effective age of ONE year.

## Land Influences

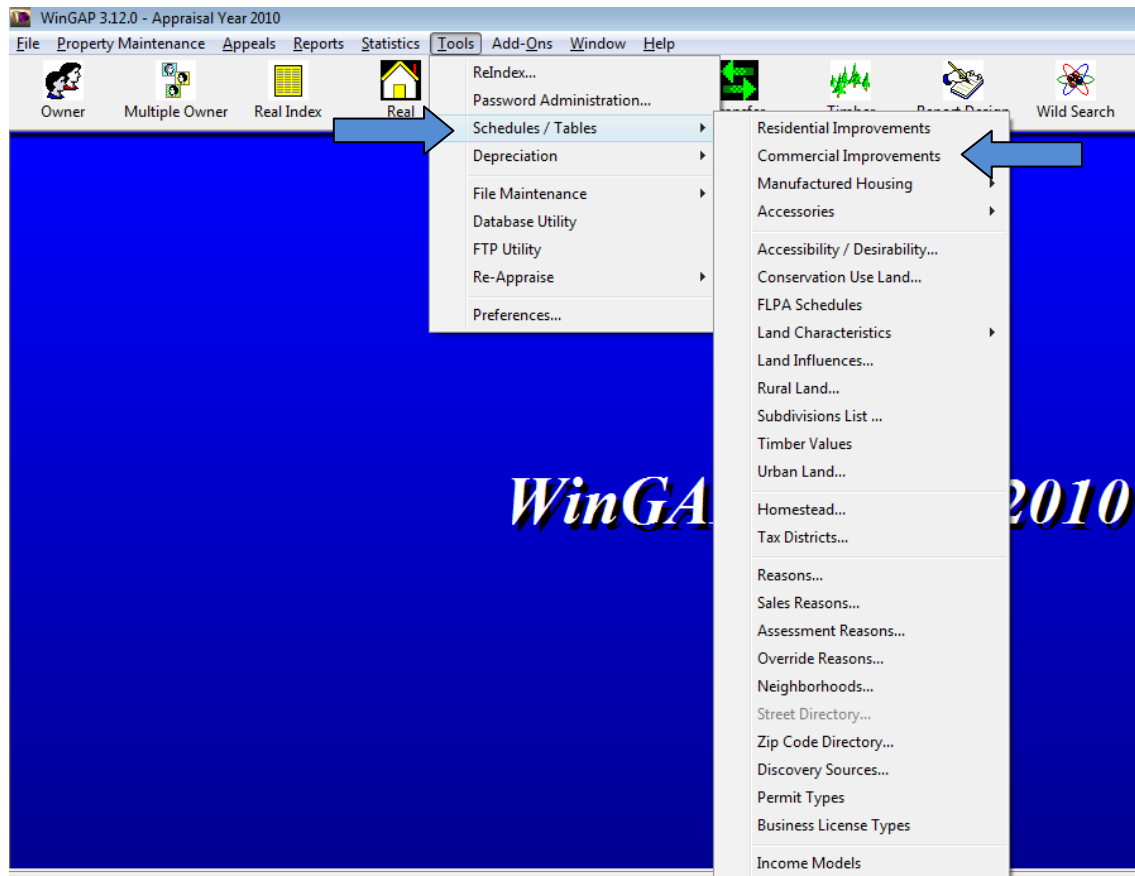
**Adjustments to Land Values** can be made on the Land Information Form in WinGAP. Up to seven adjustments to either Urban or Rural Land can be applied. The manner in which these Land Influence adjustments are made is determined by the selection made in the Land Influences combo box on the Preferences Form, as seen below. The two choices are Additive and Compound (also called multiplicative).

The image shows the 'WinGAP - Preferences' dialog box. It contains several sections: 'County Information' with fields for County Name (Jones), Address (Jones County Government Center, P O Box 1359), City/State/Zip (Gray, GA, 31032-), Phone/Fax, and Email/Web. 'Point/Base Costs' shows Residential (100.00), Commercial (100.00), Commercial Base (1.00), and Accessory (100.00). 'Depreciation Years' shows Residential (2001), Commercial (2001), MFG Housing (2001), and Accessory (2001). 'Other Options' includes checkboxes for Truncate Values, Disable Logins, bBrowser Cost Form, Lock System, Rnd Area Mult to 6 dec., Attic: Use Max/Min Area, Auto-Reasons (Real), Auto-Reasons (Pers), PT50R = LIVE DATA, COA Auto-Flag, Hide Comments, and Bsmt: Use Max/Min Area. Below these are fields for Special District Description, Parcel Number Template, Appraisal Year (2010), Rural Acre Break (30.00), PU Eq Ratio % (40.00), Return Deadline (04/01/2010), Default Startup Directory (2010), and Guest Startup Directory (2009). At the bottom, there is a red note: 'Freeport Information is now found in tax district schedule'. The 'ABOS Default' is set to 'Low' and 'Land Influences' is set to 'Compound'. 'ABOS Yr: 2010' and 'NADA Yr: 2010' are also shown. 'Help' and 'Close' buttons are at the bottom right. A callout box points to the 'Land Influences' dropdown with the text: 'How Land Influences are applied for Urban (and Rural) Land'.

The formula for Compound application (the manner in which Land Influences are more commonly applied within WinGAP) of Land Influences is as follows:  $\text{Base Land} * \text{Influence1} * \text{Influence2} * \text{Influence3} * \text{Influence4} * \text{Influence5} * \text{Influence6} * \text{Influence7} * \text{Neighborhood Influence}$ . The formula for Additive application of Land Influences is as follows:  $(\text{Base Land} + [(1 - \text{Influence1}) * \text{Base Land}] + [(1 - \text{Influence2}) * \text{Base Land}] + [(1 - \text{Influence3}) * \text{Base Land}] + [(1 - \text{Influence4}) * \text{Base Land}] + [(1 - \text{Influence5}) * \text{Base Land}] + [(1 - \text{Influence6}) * \text{Base Land}] + [(1 - \text{Influence7}) * \text{Base Land}]) * \text{Neighborhood Influence}$ .

In the above formulas, Base Land is the value of the land resulting from the calculation of the land subrecords. In the case of Rural Land, the Base Land value would include the application of the Accessibility/Desirability factor.

## Commercial Improvements Schedules Sub-menu



The Commercial Schedules sub-menu is accessed by clicking on the **Tools >> Schedules / Tables >> Commercial Improvements** menu option, as shown above.

The Commercial Improvements sub-menu is divided into four sections:

1. **Structural Components:** schedule items where square foot costs can be adjusted for building components such as exterior walls and ceilings;
2. **Base and Extra Feature:** schedule items that assist with calculating the area and size of the Commercial Improvement and Extra Features associated with the Commercial Improvement;
3. **Supplemental Schedule:** schedule items such as Area / Perimeter and Wall Height.
4. **Improvement Labels:** schedule items that hold pricing adjustments for user defined sketch/story height labels

Each of the schedule sections and associated options will be discussed in the order they appear on the Commercial Improvements Menu. However, it should be noted that the following order must be observed when establishing new schedule entries.

1. Building Types (add or confirm that the correct type exists in schedule)
2. Structural Components (add or confirm existence)
3. Area/Perimeter (add or confirm existence)
4. Wall Height (add or confirm existence)
5. Base Schedule (add)
6. Lump Sum Table (if schedule item is to be priced accordingly)
7. Income Models (if needed)

If an extra feature is being added, the appraiser should follow the order below:

1. Extra Features (add)
2. Lump Sum Extra Features (use if extra feature added in Step 1 is a lump sum)
3. Rank (confirm existence)

## Structural Components Schedule Items

### Structural Components

The first item on the Commercial Improvements Menu, Structural Elements, takes the user to the Commercial Structural Components Form, shown on the following page. This Form is used to adjust Commercial Improvement square foot costs for building components such as floor covering or heating and air conditioning. For example, the County may want to add \$2.00/square foot for carpet or \$4.00/square foot for central heating and air conditioning. The cost may vary between different types of buildings. Consequently, each group of similar buildings must have a unique Building Type code for that category of buildings.

Before the Commercial Structural Components schedule or the Commercial Base Schedule is built, it is important that a county define the commercial Building Types and set them up using the Building Types schedule found on the Commercial Improvements Menu. Once the Building Types are defined and set up, the County can then set up the Commercial Base Schedule and group commercial buildings within these broad Building Types to price them correctly, and then set up the Commercial Structural Components Schedule to price the structural elements of the Commercial Improvement. The discussion that follows on building the Commercial Structural Components schedule assumes that the Building Types have already been set up in WinGAP. Building Types will be discussed in more detail, later.

WinGAP - Commercial Structural Components

Bldg Type	Structural Element	Description
Apts, Clubs, Hotels	CLGFIN	Celotex
Apts, Clubs, Hotels	CLGFIN	Fiberglass Panels
Apts, Clubs, Hotels	CLGFIN	Metal Tile
Apts, Clubs, Hotels	CLGFIN	No Ceiling
Apts, Clubs, Hotels	CLGFIN	Panel
Apts, Clubs, Hotels	CLGFIN	Pine
Apts, Clubs, Hotels	CLGFIN	Plaster
Apts, Clubs, Hotels	CLGFIN	Plywood
Apts, Clubs, Hotels	CLGFIN	Sheetrock
Apts, Clubs, Hotels	EXWALL	Aluminum Siding
Apts, Clubs, Hotels	EXWALL	Asbestos Shingles/Siding
Apts, Clubs, Hotels	EXWALL	Brick
Apts, Clubs, Hotels	EXWALL	Brick On Concrete Block
Apts, Clubs, Hotels	EXWALL	Brick Veneer
Apts, Clubs, Hotels	EXWALL	Concrete Block
Apts, Clubs, Hotels	EXWALL	Enamel Steel
Apts, Clubs, Hotels	EXWALL	Galvanized Metal
Apts, Clubs, Hotels	EXWALL	Glass Block

Bldg Type: Apts, Clubs, Hotels

Structural Element: Ceiling Finish

Description: Celotex

**\$/Sq Ft Adj**

Quality 1 = Low Cost	0.00
Quality 2 = Fair	0.00
Quality 3 = Average	0.00
Quality 4 = Good	0.00
Quality 5 = Excellent	0.00

Buttons: Help, Cancel, New, Delete, Apply, OK

WinGAP is delivered to the County with a basic Commercial Structural Components schedule. Additions, deletions and changes can be made on the Commercial Structural Components Form to better localize this schedule for the County. The Structural Components list box is on the left of the Form. Items in the list box are arranged in Building Type order, then alphabetically by Structural Element, and then alphabetically by the Description of the Structural Element. Clicking on an item in the list box will display the valuation data for that item in the fields on the right of the list box. An explanation of each of the data entry fields follows.

- **Bldg Type:** The Building Type that these Structural Components are assigned to. A Building Type is a homogeneous group of commercial buildings with similar characteristics. For example, all convenience stores could be assigned a Building Type of 13 which encompasses all retail structures. The Building Type ties the Structural Components back to the Commercial Base schedule. The county-defined Building Type codes can be any 2-digit number, and are set up in the Building Types Schedule.
- **Structural Element:** The Description of the type of Structural Component, such as "Ceiling Finish", "Heat / AC" or "Floor Construction". Structural Elements are preset and cannot be changed by the appraiser. Following is a list of the twelve Structural Elements:
  - Ceiling
  - Exterior Wall
  - Floor Construction
  - Floor Finish
  - Foundation
  - Heat / AC
  - Interior Wall
  - Lighting
  - Roof Cover
  - Roof Frame
  - Wall Frame
  - Wiring
- **Description:** The specific type of structural element, for example, Baseboard for the Heat/AC structural element.

- **\$ / Sq Ft Adj:** There are five fields available to enter dollars per square foot adjustments for the respective Quality Classes for each Structural Component. The Quality Classes fields are synonymous with the following descriptions:

- Quality 1 = Low Cost
- Quality 2 = Fair
- Quality 3 = Average
- Quality 4 = Good
- Quality 5 = Excellent

The fields default to zero dollars for each Quality Class and are used to adjust the Commercial Improvement square foot costs for each Structural Component item. Values in these fields can be negative and take value away as well as positive to add value to the item. The **\$ / Sq Ft Adj** for each item should not be changed in a County without performing significant market studies to determine whether this value should be increased or decreased. It is not required that all Quality Classes contain a \$ Sq Ft Adj. The appraiser has complete control as to what values are inserted.

A new Structural Components item can be added to the schedule by clicking the New Button at the bottom of the Form. The Building Type field will default to the first Building Type, 11, and the Structural Element field will default to the first type, Ceiling Finish. The combo box for each field can be clicked to select the appropriate Building Type and Structural Element, then the Description for the new item is keyed into the Description field, and values can be keyed into the **\$ / Sq Ft Adj** fields to adjust the Commercial Improvement square foot costs for each Quality Class. The Apply or OK Buttons can be clicked to save the item to the schedule.

A Structural Components item can be deleted from the schedule by first clicking on the desired item in the list box, and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Structural Components item is not used by any Commercial Improvement prior to clicking the Delete Button.

The Printer Button at the bottom left of the Form will send an image of the Form to the default Windows printer. The complete Structural Components schedule can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.



## Base and Extra Features Schedule items

### Base Schedule

**NOTE: Before the Commercial Base Schedule is built it is important that a county define the Commercial Building Types and set them up using the Building Types schedule found on the Commercial Improvements Menu.**

Pricing data for various commercial buildings distinguished by Building Type are added and updated through this Item on the Commercial Improvements Menu. The discussion that follows on building the Commercial Base Schedule assumes that the Building Types have already been set up in WinGAP. A sample Commercial Base Schedule is shown below.

Fixed Text					
Academic Collge Libraries-AB18	8523	1	104.78		
Academic Collge Libraries-C18	8524	1	80.86		
Academic Collge Libraries-D18	8525	1	78.03		
Academic Collge Libraries-S18	8526	1	74.98		
Administration Office Bldg-AB18	8592	1	91.35		
Administration Office Bldg-C18	8593	1	72.23		
Administration Office Bldg-D18	8594	1	69.31		
Administration Office Bldg-DP18	8774	1	64.60		
Administration Office Bldg-S18	8505	1	66.22		

Used as Code	8523	Edit	Description	Academic Collge Libraries-AB18	
Pricing Code	SqFt		Bldg Type	Schools and Classro	
Base Cost	104.78		NAICS	18,19	

Construction Types	Cost Mult	Life Exp
Heavy Structural Steel	1.01	55
Reinforced Concrete	1.01	55
Masonry Load Bearing	1.01	55
Wood / Steel Combustible	1.01	55
Prefab Structural Steel	1.01	55

Help Cancel New Delete Apply OK

WinGAP is delivered to the County with a basic Commercial Base Schedule already set up. The items in the list box at the top of the Commercial Base Schedule Form are displayed in Description order. Clicking on an item in the list box will display the valuation data for that item in the fields beneath the list box. An explanation of each of the data entry fields follows.

- **Used as Code:** A **unique** identifying code for each commercial building. The Used as Code, which is county assigned, is designed to separate commercial buildings based on their current use. The code can be any combination of four letters or numbers. The Edit button to the right of the field must be clicked to gain access to this field. The button is placed there to prevent inadvertent changes to the Used as Code.
- **Description:** A Description of the Used as Code, normally the building name such as "Office". Thought should be given to the manner in which the description is entered. When performing data entry at the parcel level, the user will be able to locate a particular commercial schedule

entry through an incremental search of the description. Consequently, it might be of some benefit to group items by description. For example, if there will be various types of offices added to the commercial base schedule, instead of keying the descriptions as Medical Office, General Office, etc, key them as Office – Medical, Office – General, etc. This could make it easier to locate the various “used as” types of commercial improvements.

- **Pricing Code:** There is only one available Pricing Code, Square Foot.. All commercial buildings are priced by the square foot.
- **Bldg Type:** The Building Type that this particular commercial building is assigned to. The selection can be made from the available choices in this combo box. A Building Type is a homogeneous group of commercial buildings with similar characteristics. For example, all offices would have a Building Type of Off, Pub Bldg, or Sch. The Building Type ties the building back to the Commercial Structural Components schedule. Building Type codes are county-defined, can be any 2-digit number, and are set up in the Building Types Schedule.
- **Base Cost:** The Base Cost is the base dollars per square foot value for this particular type of commercial building. What is included in the Base Cost depends upon the appraisal method used by the appraiser (Calculator vs Segregated Cost). For example, the shell of an Office is to be priced at \$54.00 a square foot and the Commercial Base Cost (found in [Tools >> Preferences](#)) is \$1.00. The Base Cost for the shell Convenience Store would be \$54.00 / \$1.00, or 54.00. Thus, 54.00 would be keyed in the Base Cost field on the Commercial Base Schedule Form.
- **NAICS:** A code conforming to the North American Industrial Coding System which identifies the general use of the structure may be entered in this field. An entry is not required in this field.
- **Cost Mult:** Construction Cost Modifiers are used to adjust cost for construction type. The suggested construction types used for commercial buildings are shown below. The Construction Cost Modifiers under each Construction Type 1-5 are County-defined. The cost modifiers represent the cost variance between the different construction types. The method of determining the modifiers will be discussed later.
- **Life Exp:** The Life Expectancy in years for the different Construction Types (see Construction Types, below) of Commercial Improvements. Life Expectancy values range from 5 to 75 and must be in increments of 5. The values of the Life Expectancy codes 1 – 5 should correspond with the Construction Cost Modifier with the same code (1-5).

#### Construction Types

WinGAP Code	Description
1	Heavy Structural Steel
2	Reinforced Concrete
3	Masonry Load Bearing Walls
4	Wood/Steel Combustible
5	Prefab Structural Steel

A new item can be added to the Commercial Base Schedule by clicking the New Button at the bottom of the Form. The Used as Code is County-defined and is entered first, (the Edit button must be clicked to gain access to the field) and the Description for the new item is keyed into the Description field. The combo box for the Pricing Code and Building Type fields can be clicked to select the appropriate Pricing Code and Building Type, and values can be keyed into the Base Cost and Table Ref fields depending upon the pricing method. Values are then keyed in the Life



Expectancy and Construction Cost Modifier fields. The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Base Schedule item is not used by any Commercial Improvements prior to clicking the Delete Button.

The complete Base Schedule can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Extra Features

Extra Features are items that are attached to or part of a Commercial Improvement but are not considered in the Base Cost. For example, a canopy, sprinkler system, overhead door, or loading dock would all be considered to be Extra Features. WinGAP is delivered to the County with a basic Extra Features schedule already set up. The items in the list box at the top of the Commercial Extra Features Schedule Form, below, are displayed in alphabetical order by Description. Clicking on an item in the list box will display the calculation data for that item in the fields beneath the list box. An explanation of each of the data entry fields follows.

The screenshot shows a software window titled "WinGAP - Commercial Extra Features". It contains a list box with the following data:

Description	Comp #	Method	Table	Cost
Asphalt Plants14	X292	2	50	0.00
ATM Drive Up/Walk Up52	X336	2	CH	0.00
ATM Lobby/Retail52	X335	2	CG	0.00
Attic/Finished-C12	8088	1		40.96
Attic/Finished-D12	8090	1		37.96
Attic/Finished-DM12	8089	1		40.52
Attic/Finished-S12	8124	1		38.34
Attic/Unfinished Walk Ard-C12	8084	1		16.97
Attic/Unfinished Walk Ard-D12	8086	1		15.73
Attic/Unfinished Walk Ard-DM12	8085	1		16.79
Attic/Unfinished Walk Ard-S12	8087	1		15.88
Balconies/Arts-AB18	X192	1		38.66

Below the list box is a "Pricing Information" section with the following fields and controls:

- Comp #: X292 (with an Edit button)
- Description: Asphalt Plants14
- Pricing Method: Lump Sum (dropdown menu)
- Table Code: 50
- Base Cost: 0.00 (with a calculator icon)

At the bottom of the form are six buttons: Help, Cancel, New, Delete, Apply, and OK.

- **Comp #:** The Component number is a **unique** four character identifying code for each type of Extra Feature. The code can be any combination of four letters or numbers. An **Edit** button is located to the right of the Comp # field. The button is placed there to prevent inadvertent changes to the component number. If a component number is to be modified, the user must first click the Edit button.
- **Description:** A Description of the Extra Feature, normally the name such as "Canopy".

- **Pricing Method:** There are three available Pricing Methods, Square Foot, Lump Sum, and Non-Value Item.
  - ❑ Extra Features that are priced by the Square Foot method will always have a Base Cost value in the Base Cost field.
  - ❑ Extra Features that are priced by the Lump Sum method will always have a Table Code reference in the Table Code field to link this item to a record in the Lump Sum Extra Features Table to properly price the item by the Lump Sum method. No Base Cost is required.
  - ❑ Extra Features that are descriptive in nature would use the Non-Value Item method.
- **Table Code:** The Table Code field will contain a Table Number when the Lump Sum Method is used as the Pricing Method. When the Lump Sum Method is used, the Table Code must exist in the Extra Features schedule before the Lump Sum item is added to the Lump Sum Extra Features schedule. When the Lump Sum Pricing Method is selected, the Table Code text will transform to a **Table Code** button. Clicking the button will provide the user access to the Lump Sum Pricing tables.
- **Base Cost:** The Base Cost is the base dollars per square foot value for this particular type of Extra Feature and is used with the Square Foot Pricing Method. For example, a Canopy is to be priced at \$5.00 a square foot and the Commercial Base Cost (found in **Tools >> Preferences**) is \$1.00. The Base Cost for the Canopy would be \$5.00 / \$1.00, or 5.00. Thus, 5.00 would be keyed in the Base Cost field on the Commercial Extra Features Schedule Form. The Base Cost can also be a negative number to subtract value from the Commercial Improvement based upon the criteria of the base building.

A new item can be added to the Extra Features Schedule by clicking the New Button at the bottom of the Form. Data entry would proceed as follows:

- ❑ The Component # code is County-defined and is entered first
- ❑ The Description for the new item is keyed into the Description field.
- ❑ The combo box for the Pricing Code can be clicked to select the appropriate Pricing Code
- ❑ Values can be keyed into the Table Code, and Base Cost fields, depending upon the pricing method.
- ❑ The Apply or OK Buttons can be clicked to save the item to the schedule.

An Extra Feature item is edited by

- ❑ clicking on the item in the list box,
- ❑ changing the information in the desired field(s),
- ❑ clicking the Apply or OK Button.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Extra Features Schedule item is not used by any Commercial Improvements prior to clicking the Delete Button.

The complete Extra Features Schedule can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Lump Sum Extra Features

The Lump Sum Extra Features schedule is used to value Commercial Extra Features, such as Bathrooms or Sprinklers, that are priced by the Lump Sum or item method. A Lump Sum item in the Extra Features schedule will have a Table Code that will locate an entry in the Lump Sum Extra Features schedule and price the item accordingly. Also, any item in the Commercial Base Schedule that uses the Lump Sum method will have a Table Code that will look up an entry in the

Lump Sum Extra Features schedule and price the item. **It is critical that an entry be made in this table if an Extra Feature is assigned the Lump Sum pricing method.**

**NOTE:** The Commercial Extra Features schedule, above, should be built prior to building the Lump Sum Extra Features schedule, shown below.

Below are two examples of Lump Sum Extra Feature tables. The first example which is present in the classroom data only deals with plumbing. The other example is much more extensive. The construction of this table is at the appraiser's discretion.

WinGAP - Commercial Lump Sum Extra Features

Description	TableRef	Dim1	Dim2	Points
PLUMBING FIX	99	1	0	4.000000

Table Reference: 99      Unit Dollars: 400.000000

Dimension 1: 1  
Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

WinGAP - Commercial Lump Sum Extra Features

Description	TableRef	Dim1	Dim2	Points
ATM Drive Up/Walk Up52	CH	0	0	408.750000
ATM Lobby/Retail52	CG	0	0	212.500000
Asphalt Plants14	50	0	0	56.250000
Bathroom/Additional Fixtures12	CB	0	0	5.000000
Breweries14	53	0	0	0.720000
Cement Plants14	51	0	0	1.900000
Drive Up/Walk Up Windows52	CC	0	0	92.500000
Elevators+Freight 2/3Story13	16	0	0	332.500000
Elevators+Freight 2/3Story14	25	0	0	330.000000
Elevators+Freight 4> Story13	17	0	0	595.000000
Elevators+Freight 4> Story14	26	0	0	590.000000
Elevators+Freight Powr Door13	19	0	0	100.750000

Table Reference: CH      Unit Dollars: 40875.000000

Dimension 1: 0  
Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

The Lump Sum Extra Features Schedule form displays the existing schedule items in the list box on the top of the form. The column headings refer to the DESCRIPTION of the Lump Sum Extra Features item (from the Commercial Extra Features schedule), the TABLEREF code number, the DIM1 and DIM2 pointers, and the POINTS assigned to this type of Extra Feature. The schedule is indexed in Description order. The calculation data for each item in the list box can be displayed in the fields on bottom of the form by clicking on an item. An explanation of each of the fields on the schedule form follows.

- **Table Reference:** The Table Reference code is a **unique** County-defined number. Letters or numbers can be used, such as 1-99, AA-ZZ, or 1A, 2C. If a numeric Table Reference is less than ten (10), it should be entered as 01(a zero followed by a 1), 02, 03, etc. The Table Reference should not contain any spaces. When adding an item to the Lump Sum Extra Features schedule, this Table Reference must already exist in the Commercial Extra Features Schedule. WinGAP will assign the Description of the item in the Extra Features schedule with this Table Reference to the Description of the Lump Sum Extra Features item. This is why there is no Description data entry field on the Lump Sum Extra Features form. If the Table Reference of the Lump Sum Extra Feature does not exist in the Extra Features schedule, the Description of the Lump Sum Extra Feature will say "Not currently assigned".
- **Dimension 1:** Dimension 1 is used as a pointer in the table for locating the proper value. It can represent various characteristics of an Extra Feature such as grade code, code for type, area in the case of sprinklers, etc. On the screen image below, there are four entries with a TableRef of 78. The 78 entries represent different valuation categories for Vaults. Dim1, in this case, represents the fire rating in hours. Dim2 is not used and contains a value of 0. The appraiser is responsible for maintaining the definitions of these characteristics. The value must be numeric, and 0 is acceptable. During data entry of an improvement and associated extra features, it is not required that the user enter an exact match of the Dim1 and Dim 2 values. WinGAP will search the table and if no exact match is found, the lower end of the range will be taken. For example, if a vault door (table reference 78) with Dim 1 of 3 is added to an improvement, the value will be calculated based on the value of the Dim1 coded 2 in the table.

Description	TableRef	Dim1	Dim2	Points
Sewage Plant/Med15K-500KGPD14	63	0	0	0.040000
Sewage Plant/SmFG2K-12KGPD14	62	0	0	0.040000
Sewage Plant/SmStl1K-5KGPD14	61	0	0	0.130000
Vaults/Cable52	CE	0	0	3.450000
Vaults/Cable52	CE	0	0	5.000000
Vaults/Doors Rec Stg Fire Re52	78	1	0	27.500000
Vaults/Doors Rec Stg Fire Re52	78	2	0	30.000000
Vaults/Doors Rec Stg Fire Re52	78	4	0	33.750000
Vaults/Doors Rec Stg Fire Re52	78	6	0	41.250000
Vaults/Doors Sec Attack Res52	77	2	3	67.500000
Vaults/Doors Sec Attack Res52	77	3	6	181.250000
Vaults/Doors Sec Attack Res52	77	7	9	227.500000

Table Reference: 78      Unit Dollars: 3000.000000

Dimension 1: 2  
Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

- **Dimension 2:** The Dimension 2 value is used to further define the Extra Feature valuation and is used in conjunction with Dimension 1 to locate the proper value. The value must be numeric and 0 is acceptable.

- **Unit Dollars:** The actual dollar cost of the Lump Sum item. WinGAP will make the necessary adjustments based on the Commercial Improvement Point cost and save the Points accordingly.

A new item can be added to the Lump Sum Extra Features Schedule by

- ❑ Clicking the New Button at the bottom of the Form.
- ❑ The Table Reference # code is County-defined and is entered first
- ❑ The values for the Dimension 1, Dimension 2, and Unit Dollars fields are keyed.
- ❑ The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Lump Sum Extra Features Schedule item is not used by any Extra Features or Commercial Improvements prior to clicking the Delete Button.

The complete Lump Sum Extra Features Schedule can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Supplemental Schedule Items

### Area / Perimeter

The Area / Perimeter Table contains cost factors, or multipliers, that adjust the cost of a Commercial Improvement for shape. These multipliers are distinguished by Building Type and are added and updated through the Area / Perimeter option on the Commercial Improvements sub-menu.

A basic Area / Perimeter Table is supplied with WinGAP. The Area / Perimeter Table Form, below, displays the existing schedule items in the list box on the left side of the form. The column headings refer to the Building Type, Area / Perimeter Ratio and the Multiplier (see below). The schedule is indexed in Building Type and Area / Perimeter Ratio order. The Building Type for the various Area / Perimeter Ratios and Multipliers can be selected by clicking on the Building Type combo box.

**Note: Every Building Type must have an entry in the Area / Perimeter table. Building Types must be established before Area / Perimeter entries can be made.**

The valuation data for each item in the list box can be displayed in the fields on the right side of the form by clicking on an item. An explanation of each of the fields on the Table form follows.

BLDG_TYPE	A/P Ratio	Multiplier
011	5.00000	1.33
011	6.00000	1.25
011	7.00000	1.19
011	8.00000	1.14
011	9.00000	1.11
011	10.00000	1.08
011	12.00000	1.04

A/P Ratio: 5.00000  
Multiplier: 1.33

Buttons: Help, Cancel, New, Delete, Apply, OK

- **Building Type:** The Building Type for this Area / Perimeter schedule item. Building Types must be set up before Area / Perimeter items can be added to the schedule. The user selects the correct Building Type from the combo box, and tabs to the A/P Ratio field.
- **A / P Ratio:** The Area / Perimeter Ratio is the ratio of the area of the Commercial Improvement to the perimeter of the Commercial Improvement. For example, a Commercial Improvement has 10,000 square feet and a Perimeter of 400. The Area is divided by the Perimeter, in this example  $10000 / 400$ , giving an Area / Perimeter Ratio (also called the Argument) of 25. Thus, 25 would be keyed in the Area / Perimeter field on the Area / Perimeter Table Form. The appraiser can make as many entries as necessary for the various area / perimeter ratios. However, it is not necessary that the entries be made in increments of 1. If an increment other than 1 is used and a calculated area / perimeter ratio for a commercial improvement falls between entries in the table, WinGAP will use the multiplier associated with the higher A/P ratio. For example, if the table contains entries for A/P ratios of 20 and 25 and the ratio for the commercial improvement is 23, WinGAP will use the multiplier associated with 25. Only the integer portion of the A/P ratio is used in the lookup. If the A/P ratio is 20.88, WinGAP would use 20 as the lookup ratio.
- **Multiplier:** Once the Area / Perimeter Ratio is determined, the Multiplier for that Area / Perimeter, which is a factor that adjusts for the shape of the Commercial Improvement, is keyed into the Multiplier field.

A new item can be added to the Area / Perimeter Table by

- ☐ Clicking the New Button at the bottom of the Form.
- ☐ The Building Type should be selected first
- ☐ The Area / Perimeter Ratio and Multiplier values can be keyed into their respective fields.
- ☐ The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Area / Perimeter Table item is not used by any Commercial Improvements prior to clicking the Delete Button.

The complete Area / Perimeter Table can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Building Types

Building Types categorize Commercial Improvements based on similarities in Construction Type and other components, such as Area / Perimeter and Wall Height. As mentioned under Commercial Structural Components, above, a Building Type is a homogeneous group of commercial buildings that will have the same pricing/adjustments for these additional items. The commercial buildings in these types do not have to be of the same use as long as the costs for the Commercial Structural Elements, such as heating and air conditioning, are similar. The cost for the Commercial Structural Elements may vary between different types of buildings. Consequently, each group of similar buildings must have a unique code for that type of building.

At the top of the next page is a suggested Building Type categorization. Once the Building Types are defined the county can set up the Commercial Base Schedule, the Commercial Structural Components Schedule, and other Commercial Improvement Schedules to price Commercial Improvements correctly.

## Description

Apartments, Clubhouses, Hotels  
General Stores, General Retail, Convenience Stores  
Garages, Warehouses, Airplane Hangers, Industrial Buildings  
Office Buildings, Public Buildings, Schools  
Churches, Theaters, Auditoriums  
Sheds and Farm Buildings  
Schools and Classrooms  
Special Supplemental Cost  
Miscellaneous

WinGAP is delivered to the County with a single Building Type that will display in the list box on the left side of the Building Type Form, as seen in the first image below. Also shown below is another example of a Building Type schedule. The construction of this table, as well as all other commercial tables, is at the discretion of the appraiser.

The screenshot shows the 'WinGAP - Background Information : COM IMP BLDG TYPE' window. On the left, a list box contains a single entry: 'GENERAL COMMERCIAL/INDUSTRIAL'. To the right, the 'Code' field is '001' and the 'Descrip' field is 'GENERAL COMMERCIAL/INDUSTRI'. Below these, the 'Values' section contains three rows: 'Lump Sum \$' with a value of '0', '\$ / Square Feet' with a value of '0.00', and 'Cost Multiplier' with a value of '0.00'. Each value is in a text box with a calculator icon to its right. At the bottom, there are buttons for 'Help', 'Cancel', 'New', 'Delete', 'Apply', and 'OK'.

The screenshot shows the 'WinGAP - Background Information : COM IMP BLDG TYPE' window with a list of building types. The list box on the left contains the following entries: 'Apts, Clubs, Hotels', 'Dwellings, Multiples, Motel', 'Stores & Commercials', 'Garages, Ind, Lofts, Whses', 'Offices, Medical & Public Bldg', 'Churches, Theaters, Auditorim', 'Sheds and Farm Buildings', 'Schools and Classrooms', 'Special Supplemental Cost', and 'Miscellaneous'. The 'Apts, Clubs, Hotels' entry is selected. To the right, the 'Code' field is '011' and the 'Descrip' field is 'Apts, Clubs, Hotels'. The 'Values' section contains three rows: 'Lump Sum \$' with a value of '0', '\$ / Square Feet' with a value of '0.00', and 'Cost Multiplier' with a value of '0.00'. Each value is in a text box with a calculator icon to its right. At the bottom, there are buttons for 'Help', 'Cancel', 'New', 'Delete', 'Apply', and 'OK'.



Additions or changes can be made to better localize this schedule for the County. A maximum of 999 Building Types can be added to the schedule, and there must be at least ONE Building Type in the schedule. A new item can be added to the Building Types Schedule by

- ❑ Clicking the New Button at the bottom of the Form
- ❑ Completing the Description field (the Code field above is automatically filled in by WinGAP).
- ❑ The Apply or OK Buttons can be clicked to save the new item to the schedule. (The Values fields are not used with the Building Type schedule).

At the present time, it is not possible to delete an item from the Building Type Schedule. The complete Building Type Schedule can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Wall Height

The Wall Height Table contains cost factors, or multipliers, that allow for adjustments based on the height of the walls of a Commercial Improvement. These multipliers are distinguished by Building Type and are added and updated through the Wall Height option on the Commercial Improvements sub-menu. **Note: Every Building Type must have an entry in the Wall Height table. Building Types must be established before Wall Height entries can be made.**

BLDG_TYPE	Wall Ht	Multiplier
011	7.00000	0.92
011	8.00000	0.95
011	9.00000	0.97
011	10.00000	1.00
011	11.00000	1.03
011	12.00000	1.06
011	13.00000	1.08

A basic Wall Height Table similar to the example above is supplied with WinGAP. The Wall Height Table Form displays the existing schedule items in the list box on the left side of the form. The column headings refer to the Building Type, Wall Height and the Multiplier (see below). The schedule is indexed in Building Type and Wall Height order. The Building Type for the various Wall Heights and Multipliers can be selected by clicking on the Building Type combo box. The valuation data for each item in the list box can be displayed in the fields on the right side of the form by clicking on an item. An explanation of each of the fields on the schedule form follows.

- **Building Type:** The Building Type for this Wall Height schedule item. Building Types must be set up before Wall Height items can be added to the schedule. The user selects the correct Building Type from the combo box, and tabs to the Wall Height field.
- **Wall Height:** The Wall Height is just that, the Wall Height, in feet, of the Commercial Improvement. If the Improvement has more than one story, the Wall Heights for the stories are averaged. For example, a 5 story building that is 60 feet tall would have a Wall Height of 12 feet. The appraiser can make as many entries as necessary for the various wall heights. However, it is not necessary that the entries be made in increments of 1. If an increment other than 1 is used and a wall height for a commercial improvement falls between entries in the



table, WinGAP will use the multiplier associated with the lower wall height. For example, if the table contains entries for wall heights of 20 and 25 and the commercial improvement has a wall height of 23, WinGAP will use the multiplier associated with 20.

- **Multiplier:** The Multiplier is a factor that adjusts the commercial improvement value for the Wall Height of the Commercial Improvement.

A new item can be added to the Wall Height Table by

- ❑ Clicking the New Button at the bottom of the Form.
- ❑ The Building Type should be selected
- ❑ The Wall Height and Multiplier values can be keyed into their respective fields.
- ❑ The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Wall Height Table item is not used by any Commercial Improvements prior to clicking the Delete Button.

The complete Wall Height Table can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Commercial Rank

The Commercial Rank Table contains cost factors, or multipliers, that allow for adjustments to extra feature values based on the quality class of any commercial extra feature relative to the improvements grade. These multipliers are added and updated through the Rank option on the Commercial Improvements sub-menu.

Rank - Description	Multiplier
1 - Excellent	1.50
2 - Good	1.25
3 - Average	1.00
4 - Fair	0.75
5 - Poor	0.50

Description: Excellent

Rank: 1 Multiplier: 1.50

Buttons: Help, Cancel, New, Delete, Apply, OK

A basic Rank Table similar to the example above is supplied with WinGAP. The Rank Table Form displays the existing schedule items in the list box on the left side of the form. The column headings refer to the Rank, the Rank Code, associated Description, and the Multiplier (see below). The schedule is indexed in Rank order. WinGAP is supplied to the County with a listing of five (5) Ranks and Multipliers, ranging from Excellent with a Multiplier of 1.5 to Poor with a Multiplier of 0.5. An explanation of each of the fields on the schedule form follows.

- **Description:** The Description, of the Rank, such as Excellent or Low Cost.
- **Rank:** The code of the Rank. This field is a single position, and numbers (1 through 9) or letters (A through Z) or can be used, which provides the capability of adding 35 different ranks.
- **Multiplier:** The Multiplier is a factor that adjusts for the quality class of the Extra Feature.

The valuation data for each item in the list box can be displayed in the fields on the right side of the form by clicking on an item. A Rank item can be edited by clicking on the item in the list box and changing the data in the desired field. A new Rank item can be added to the Rank Table by

- ❑ Clicking the New Button at the bottom of the Form.
- ❑ The Description, Rank Number, and Multiplier values can be keyed into their respective fields.
- ❑ The Apply or OK Button can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Rank Table item is not used by any Commercial Improvements prior to clicking the Delete Button.

The complete Rank Table can be printed by going to **Reports >> Real >> Print Schedules**, or by using either the Report Designer or FoxPro.

## Improvement Labels

### Improvement Labels (Primary / Upper / Interior / Additions / Appendages)

The Improvement Labels schedule holds adjustments for user defined story height labels. In addition to story height adjustments, the appraiser can also key factors that are used in the process of calculating total heated area. The Improvement Labels Form is shown below.

LABEL	DESCRIP	SQFT	COSTFACT	AREAFACT	LABELTYPE	BLDGTYPE	VALMETHOD
1.5c	1.5 Story	0.000000	1.6000	1.5000	Primary	Commercial	0
1STc	1 Story	0.000000	1.0000	1.0000	Primary	Commercial	0
2.5c	2.5 Story	0.000000	2.5000	1.0000	Primary	Commercial	0
2STc	2 Story	0.000000	2.0000	2.0000	Primary	Commercial	0
3STc	3 Story	0.000000	3.0000	3.0000	Primary	Commercial	0

Label:   
 Description:   
 Label Type:   
 Cost / SQFT:   
 Cost Factor:   
 Area Factor:

- **Label:** The label is a 4 position user defined field. Almost any combination of letters and numbers can be used to create labels. The only exceptions are commas and semicolons; neither of which should be used in defining a label.
- **Description:** The description is also a user defined field that better describes the associated label. The description should be clear and precise enabling the user to clearly identify which label is appropriate to assign to a polygon when sketching takes place.
- **Label Type:** The label type is a drop down list of the 4 options that are available for selection. The available label types are:
  - Addition – identified as a double black line when sketched
  - Appendage – identified as a solid blue line when sketched
  - Interior – identified as a broken green line when sketched
  - Primary – identified as a solid red line when sketched
  - Upper – identified as a broken purple line

Interior, Primary, and Upper are the three label types that are assigned story height (cost) factors which are used in the adjustment of the base dollars. Interior and Upper label types are often referred to as “upper level” labels since they are normally used to define sketches that represent an upper level footprint. Primary labels are generally assigned to lower level footprints. Primary, Interior, and Upper labels contribute to the accumulation of heated area. Addition and Appendage label types function only in a descriptive manner with regard to Commercial Improvements.

- **Cost / SQFT:** contains the cost for Addition and Appendage label types. For commercial improvements, additions and appendages are currently not priced from their sketches but from the Extra Feature schedules. However, due to validation routines a value of 1.00 must be keyed in this field.
- **Cost Factor:** The story height adjustment for Interior and Primary label types. Other label types should be assigned a cost factor of 1.00. The cost factor should depict the difference in value that is attributable to the label and associated construction.
- **Area Factor:** The adjustment that is made to the square footage of a polygon or sketched area. The resulting adjusted square footage is then added to the total area. Addition and Appendage label types should be assigned an area factor of 1.00.

A story height level of 1.0 story would more than likely be assigned an area factor of 1.00. A 1.5 story label would perhaps have an area factor of 1.50. An interior label of 2<sup>nd</sup> designed to accommodate a second floor upper level would also carry an area factor of 1.00. A 2st Primary label that was used to define a two story polygon would be assigned an area factor of 2.00 to account for the upper level since the label would be attached to the ground floor footprint.

A NEW Improvement Label can be **added** to the Commercial Improvement Labels schedule by:

- ☐ clicking the New button
- ☐ clicking the Com radio button in the Building Type\_section
- ☐ clicking in the Label field (make sure the cursor is at the far left of the field) and keying the new Improvement Label
- ☐ using the Tab key to go to the rest of the data entry fields where the new information can be keyed
- ☐ the Apply or OK Button should be clicked to save the data

Labels can be **edited** by:

- ☐ Clicking the Com radio button in the Building Type section
- ☐ Selecting the label in the list box
- ☐ Modifying the fields where data should be changed
- ☐ Clicking Apply to save

An Improvement Label cannot be **deleted** from the schedule by the user. If the County wishes to delete a Commercial Improvement Label, it can be handled by any WinGAP Agent during an Online Support Session.

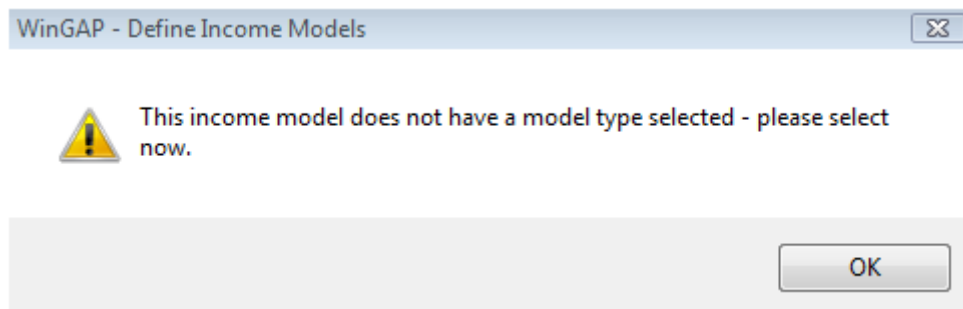
The Commercial Improvement Labels schedule can be printed by going to **Reports >> Real >> Print Schedules**, (called Commercial Sketch Labels) or by using either the Report Designer or FoxPro.

## Income Models

### Introduction

The last item on the **Tools >> Schedules / Tables Menu**, **Income Models**, presents a schedule that defines the models used in the pricing of Real Property with the Income Method of Valuation. The Income Models schedule must be set up prior to using the Income approach to value property. The Income Models menu item allows the appraiser to establish models that will be used in the valuation of commercial improvements. The appraiser may create as many models as necessary choosing from four (4) different model types.

Clicking on the Income Models option on the **Tools >> Schedules / Tables Menu** will produce the following message if no Income Models exist:



Clicking the OK button will take the user to the empty Define Income Models schedule form, as seen below.

A screenshot of the "WinGAP - Define Income Models" form. At the top is a table with four columns: "MODELKEY", "MODELTYPE", "DESCRIP", and "Unit 1 Desc". Below the table is a "Model Type" section with four checkboxes: "\$ / SF", "\$ / Room", "\$ / Bedroom", and "GRM". There is also a "Monthly Rate" checkbox. To the right of these is a "Model Description" field and a "Unit Description" field. Below these is a table with two columns: "Unit Description" and "Unit Rent". To the right of this table is a list of input fields for various rates: "\$ / SF", "\$ / Room", "GRM", "Vacancy %", "Expenses %", and "Cap Rate". At the bottom is a "Comments" text area. The form has several buttons at the bottom: "Help", "Cancel", "Delete", "New", "Apply", and "OK".

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
----------	-----------	---------	-------------

**Model Type**

☐ \$ / SF  
☐ \$ / Room  
☐ \$ / Bedroom  
☐ GRM

☐ Monthly Rate

Model Description:

Unit Description:

Unit Description	Unit Rent
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

\$ / SF:  0.00  
\$ / Room:  0  
GRM:  0.00  
Vacancy %:  0  
Expenses %:  0  
Cap Rate:  0.000

Comments:

Buttons: Help, Cancel, Delete, New, Apply, OK

The New button should be clicked to begin adding Income Models.

If Income Models exist, clicking on the Income Models option on the **Tools >> Schedules / Tables** Menu will produce the Define Income Models schedule form, as seen below.

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
2	4	Fair Oaks/Park Oaks/Timberline/Old Creek	3 Bedroom
3	3	Stonecrest	3 Bed / 3 Bath Flat
4	3	Whistlebury Walk	2 Bed TH
5	4	Woodsong	3 Bed / 3 Bath
6	4	Creekstone	2 Bed / 2 Bath
7	4	Deer Creek	2 Bed
8	3	Campus Lodge	2 Bed / 2 Bath
9	4	Oak Ridge	2 Bed / 2 Bath Flat

**Model Type**

☐ \$ / SF  
☐ \$ / Room  
☐ \$ / Bedroom  
☒ GRM

☐ Monthly Rate

**Model Description**  
Fair Oaks/Park Oaks/Timberline/Old Creek

**Unit Description**  
Unit Rent

3 Bedroom	795	\$ / SF	0.00
2 Bedroom	650	\$ / Room	0
Three Bedroom	0	GRM	100.00
Four Bedroom	0	Vacancy %	0
Five Bedroom	0	Expenses %	0
Six Bedroom	0	Cap Rate	0.000

**Comments**

18 duplexes at Timberline sold \$142,000 each; 8 at Old Creek sold \$139,375 each (2004).  
15 Duplexes at Fair Oaks sold in 2003 for \$134,000 each.

Buttons: Help, Cancel, Delete, New, Apply, OK

The column headings refer to

- **Model Key**
- **Model Type**
- **Description**
- **Unit 1 Description**

Additional headings can be displayed by sliding the horizontal scroll bar to the right. The other available headings are:

- **Unit 1 Rent**
- **Unit 2 Description**
- **Unit 2 Rent**
- **Unit 3 Description**
- **Unit 3 Rent**
- **Unit 4 Description**
- **Unit 4 Rent**
- **Unit 5 Description**
- **Unit 5 Rent**
- **Unit 6 Description**
- **Unit 6 Rent**
- **Square Feet**
- **Room**

- **GRM**
- **Vacancy**
- **Expense**
- **CapRate**
- **Monthly**
- **Comments**

The column headings represent data fields in the inc\_model.dbf where the information is stored for each income model. The schedule is indexed in Model Key order.

### Setting Up Income Models

The first step in setting up Income Models is to define the Model Type. There are four Income Models:

- **\$ / SF:** If the income of the property is based on a dollars per square foot rate, then this Model Type option should be checked. Properties that would use this valuation option include warehouses and other large storage facilities.
- **\$ / Room:** If the property's income is related to the number of rooms, then this Model Type option should be checked. Properties that would use this valuation option include offices and other similar types of commercial properties.
- **\$ / Bedroom:** If the rental income of the property is based on based on the number of bedrooms, then this Model Type option should be checked. Apartment complexes would examples of properties receiving income in this manner.
- **GRM:** If the property is to be valued by a Gross Rent Multiplier, then this Model Type option should be checked. Any property type may be valued by a GRM.

The Model Type selection will determine which of the remaining items are available for data entry. The following table defines the relationship between the model types and the income fields.

Model Type No	Model Type	Income Field
1	\$ / SF	\$ / SF
2	\$ / Room	\$ / Room
3	\$ / Bedroom	Unit Description & Unit Rent
4	GRM	Unit Description, Unit Rent & GRM

The Model Description field is used with all Model Types. All model types with the exception of GRM will have the Vacancy %, Expense % and Cap Rate fields available. The Cap Rate field will not be open for data entry when GRM is selected as a Model Type..

A new Income Model item can be added to the schedule by

- ☐ Clicking the New Button at the bottom of the Form.
- ☐ The Model Type should be selected first from one of the four available options
- ☐ The Description of the Model should be keyed.
- ☐ Then the values are keyed into the appropriate income fields.
- ☐ The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Income Models schedule item is not used by any Commercial Improvements prior to clicking the Delete Button. The complete Income Models schedule can be printed by using either the Report Designer or FoxPro.

An explanation of each of the fields, for each Income Model Type, on the Define Income Models Form follows.

## \$ / SF Model Type

The fields available for the **\$ / SF Model Type** are as follows:

- **Model Key (only shown in list box):** The model key is a unique number that is assigned by WinGAP. It is used to link the schedule model to the commercial improvements that the model has been assigned to.
- **Model Type:** Discussed earlier under Setting Up Income Type Models.
- **Model Description:** The appraiser's definition or title for the income model being added, such as Apartments. The description can be as detailed as will fit in the 38 character wide field. From the Model Description field the Tab key will take the user to the first of six Unit Description and Unit Rent fields.
- **\$ / SF:** The dollars per square foot rental rate for this property type.
- **\$ / Room:** Not available for this Model Type.
- **GRM:** Not available for this Model Type.
- **Vacancy %:** The standard percentage of vacancy for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 10% Vacancy Rate would be entered as 10, not .10.
- **Expenses %:** The standard allowable expense percentage for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 30% expense rate should be entered as 30, not .30.
- **Cap Rate:** The standard Capitalization Rate for the property type. The Cap Rate should be entered as two whole numbers followed by three decimals. A Cap Rate of .0825 should be entered as 8.25.
- **Monthly Rate:** The checkbox defines the income term. If the \$ / SF rent is a monthly rate instead of an annual rate, this box should be checked. WinGAP will convert monthly rents to annual terms during the income valuation. If the box is unchecked, the rent will represent an annual amount.
- **Comments:** Comments about the Model Type and valuation method can be entered into this field

Once all the data is entered for the Model Type, the Apply button can be clicked to save the Model Type. An example is shown on the next page for the \$ / SF Model Type called "Moss Point Manor".

WinGAP - Define Income Models

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
29	4	Woodlands Cottages	1 Bed / 1 Bath
30	3	Athens Highlands	2 Bed/ 1 Bath (Lower)
31	4	Southhampton New	3 Bed / 3.5 Bath w/Bsm
32	3	Mi Casa	2 Bed/ 1 Bath
33	1	Moss Point Manor	One Bedroom
34	2	Cove Street Market Place	One Bedroom
35	1	Arbor Station	One Bedroom

**Model Type**

☒ \$ / SF  
☐ \$ / Room  
☐ \$ / Bedroom  
☐ GRM

☐ Monthly Rate

Comments

Model Description: Moss Point Manor

Unit Description	Unit Rent	\$ / SF	\$ / Room	GRM	Vacancy %	Expenses %	Cap Rate
One Bedroom	0	2.00	0	0.00	50	25	1.000
Two Bedroom	0						
Three Bedroom	0						
Four Bedroom	0						
Five Bedroom	0						
Six Bedroom	0						

Buttons: Help, Cancel, Delete, New, Apply, OK

### \$ / Room Model Type

The fields available for the **\$ / Room Model Type** are as follows:

- **Model Key (only shown in list box):** The model key is a unique number that is assigned by WinGAP. It is used to link the schedule model to the commercial improvements that the model has been assigned to.
- **Model Type:** Discussed earlier under Setting Up Income Type Models.
- **Model Description:** The description of the Income Model, such as Apartments. The description can be as detailed as will fit in the 38 character wide field. From the Model Description field the Tab key will take the user to the first of six Unit Description and Unit Rent fields.
- **\$ / SF:** Not available for this Model Type.
- **\$ / Room:** The rent per room expressed as dollars per Room for this Model Type.
- **GRM:** Not available for this Model Type.
- **Vacancy %:** The standard percentage of vacancy for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 10% Vacancy Rate would be entered as 10, not .10.
- **Expenses %:** The standard allowable expense percentage for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 30% expense rate should be entered as 30, not .30.
- **Cap Rate:** The standard Capitalization Rate for the property type. The Cap Rate should be entered as two whole numbers followed by three decimals. A Cap Rate of .0825 should be entered as 8.25.
- **Monthly Rate:** If the \$ / SF rent is a monthly rate instead of an annual rate, this box should be checked.
- **Comments:** Comments about the Model Type and valuation method can be entered into this field



Once all the data is entered for the Model Type, the Apply button can be clicked to save the Model Type. An example is shown below for the \$ / Room Model Type called "Cove Street Market Place".

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
29	4	Woodlands Cottages	1 Bed / 1 Bath
30	3	Athens Highlands	2 Bed/ 1 Bath (Lower)
31	4	Southhampton New	3 Bed / 3.5 Bath w/Bsm
32	3	Mi Casa	2 Bed/ 1 Bath
33	1	Moss Point Manor	One Bedroom
34	2	Cove Street Market Place	One Bedroom
35	1	Arbor Station	One Bedroom

**Model Type**

☐ \$ / SF  
☒ \$ / Room  
☐ \$ / Bedroom  
☐ GRM

☐ Monthly Rate

**Model Description** Cove Street Market Place

**Unit Description** **Unit Rent**

One Bedroom	0	\$ / SF	0.00
Two Bedroom	0	\$ / Room	1,000
Three Bedroom	0	GRM	0.00
Four Bedroom	0	Vacancy %	75
Five Bedroom	0	Expenses %	50
Six Bedroom	0	Cap Rate	1.250

**Comments**

Help Cancel Delete New Apply OK

### \$ / Bedroom Model Type

The fields available for the \$ / Bedroom Model Type are as follows:

- **Model Key (only shown in list box):** The model key is a unique number that is assigned by WinGAP. It is used to link the schedule model to the commercial improvements that the model has been assigned to.
- **Model Type:** Discussed earlier under Setting Up Income Type Models.
- **Model Description:** The description of the Income Model, such as Apartments. The description can be as detailed as will fit in the 38 character wide field. From the Model Description field the Tab key will take the user to the first of six Unit Description and Unit Rent fields.
- **Unit Description:** A Description of each of the types of Units is keyed in these fields.
- **Unit Rent:** The Unit Rent associated with each type of Unit is keyed into these fields.
- **\$ / SF:** Not available for this Model Type.
- **\$ / Room:** Not available for this Model Type.
- **GRM:** Not available for this Model Type.
- **Vacancy %:** The standard percentage of vacancy for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 10% Vacancy Rate would be entered as 10, not .10.

- **Expenses %:** The standard allowable expense percentage for the property type. This should be entered as a whole number, not the decimal equivalent of the percentage. A 30% expense rate should be entered as 30, not .30.
- **Cap Rate:** The standard Capitalization Rate for the property type. The Cap Rate should be entered as two whole numbers followed by three decimals. A Cap Rate of .0825 should be entered as 8.25.
- **Monthly Rate:** If the \$ / SF rent is a monthly rate instead of an annual rate, this box should be checked.
- **Comments:** Comments about the Model Type and valuation method can be entered into this field

Once all the data is entered for the Model Type, the Apply button can be clicked to save the Model Type. An example is shown below for the \$ / Bedroom Model Type called "Stonecrest".

**WinGAP - Define Income Models**

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
2	4	Fair Oaks/Park Oaks/Timberline/Old Creek	3 Bedroom
3	3	Stonecrest	3 Bed / 3 Bath Flat
4	3	Whistlebury Walk	2 Bed TH
5	4	Woodsong	3 Bed / 3 Bath
6	4	Creekstone	2 Bed / 2 Bath
7	4	Deer Creek	2 Bed
8	3	Campus Lodge	2 Bed / 2 Bath
9	4	Oak Ridge	2 Bed / 2 Bath Flat

**Model Type**

☐ \$ / SF  
☐ \$ / Room  
☒ \$ / Bedroom  
☐ GRM

☒ Monthly Rate

Model Description: Stonecrest

Unit Description: Unit Rent

3 Bed / 3 Bath Flat	1,050
2 Bed / 2.5 Bath Townhome	800
Three Bedroom	0
Four Bedroom	0
Five Bedroom	0
Six Bedroom	0

\$ / SF: 0.00  
 \$ / Room: 0  
 GRM: 0.00  
 Vacancy %: 5  
 Expenses %: 40  
 Cap Rate: 9.250

Comments:

Buttons: Help, Cancel, Delete, New, Apply, OK

## GRM Model Type

The fields available for the **GRM Model Type** are as follows:

- **Model Key (only shown in list box):** The model key is a unique number that is assigned by WinGAP. It is used to link the schedule model to the commercial improvements that the model has been assigned to.0
- **Model Type:** Discussed earlier under Setting Up Income Type Models.
- **Model Description:** The description of the Income Model, such as Apartments. The description can be as detailed as will fit in the 38 character wide field. From the Model

Description field the Tab key will take the user to the first of six Unit Description and Unit Rent fields.

- **\$ / SF:** The dollars per square foot rental rate for this property type.
- **\$ / Room:** The dollars per room for this Model Type.
- **GRM:** The Gross Rent Multiplier for this Model Type.
- **Vacancy %:** Not available for this Model Type.
- **Expenses %:** Not available for this Model Type.
- **Cap Rate:** Not available for this Model Type.
- **Monthly Rate:** Not available for this Model Type.
- **Comments:** Comments about the Model Type and valuation method can be entered into this field

Once all the data is entered for the Model Type, the Apply button can be clicked to save the Model Type. An example is shown below for the GRM Model Type called "Woodsong".

**WinGAP - Define Income Models**

MODELKEY	MODELTYPE	DESCRIP	Unit 1 Desc
2	4	Fair Oaks/Park Oaks/Timberline/Old Creek	3 Bedroom
3	3	Stonecrest	3 Bed / 3 Bath Flat
4	3	Whistlebury Walk	2 Bed TH
5	4	<b>Woodsong</b>	3 Bed / 3 Bath
6	4	Creekstone	2 Bed / 2 Bath
7	4	Deer Creek	2 Bed
8	3	Campus Lodge	2 Bed / 2 Bath
9	4	Oak Ridge	2 Bed / 2 Bath Flat

**Model Type**

☐ \$ / SF  
☐ \$ / Room  
☐ \$ / Bedroom  
☒ GRM

☐ Monthly Rate

Comments

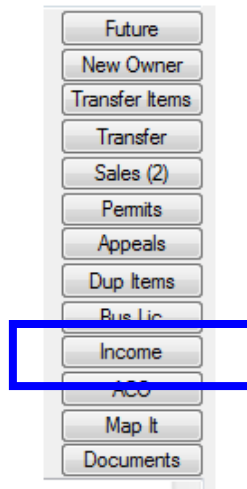
Unit Description	Unit Rent	\$ / SF	\$ / Room	GRM	Vacancy %	Expenses %	Cap Rate
3 Bed / 3 Bath	1,140	0.00	0	9.30	0	0	0.000
3 Bed / 3 Bath 2 Story	1,185						
4 Bed / 4 Bath	1,420						
4 Bed / 3 Bath 2 Story	1,420						
Five Bedroom	0						
Six Bedroom	0						

Buttons: Help, Cancel, Delete, New, Apply, OK

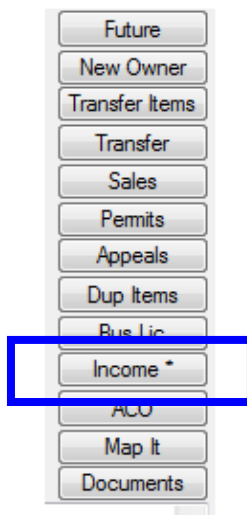
At the conclusion of entering the Income Model Types, the OK button can be clicked to save the last Income Model entered and exit the Income Models schedule.

## Income Details

The Income Form is used to add, edit, or delete information used to value property by the Income Approach. The Form is accessed by clicking the **Income Button** located on the bottom right of the **Real Property General Information Form**, as seen below



If the parcel has an existing Income Detail record, a star "\*" will appear on the Income Button, as seen below.



Clicking this button will take the user to the existing Income Details Form, as seen on the next page. The Income Model Type used to value this property will be highlighted in the list box at the top of the Income Details Form.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
7	4	Deer Creek	2 Bed	525 Tw
8	3	Campus Lodge	2 Bed / 2 Bath	828 Tw
9	4	Oak Ridge	2 Bed / 2 Bath Flat	695 Tw
10	4	Hillside	2 Bed / 2 Bath Flat	650 Tw
11	4	Scenic Hills	2 Bed / 2.5 Bath TH	750 Tw

**Valuation Details**

	Base	Adj	Final	Units	Income
2 Bed / 2 Bath Flat	695	0 %	695	50	34,750
Two Bedroom	0	0 %	0	0	0
Three Bedroom	0	0 %	0	0	0
Four Bedroom	0	0 %	0	0	0
Five Bedroom	0	0 %	0	0	0
Six Bedroom	0	0 %	0	0	0
\$ / SF	0.00	0 %	0.00	0	0
\$ / Room	0	0 %	0	0	0
GRM	8.20	0 %	8.20	0	34,750
Misc. Income	0				34,750
Vacancy %	0	0 %	0		34,750
Expenses %	0	0 %	0		284,950
Cap Rate	0.000	0 %	0.000		0

Comments:

Reset

**Dig Class**

- ☒ RES
- ☐ AGR
- ☐ COM
- ☐ IND

PGI: 34,750

EGI: 34,750

NOI: 284,950

Total Value: 284,950

Personal Value: 36,500

Real Value: 248,450

Land Value: 36,500

Imp Value: 248,450

☒ Income as Parcel Current Value

Model Term: *Annual*

Cancel Delete New Apply OK

### Adding an Income Details record to the parcel

When the Income Form is first accessed, and no Income information has yet been added for the Parcel, the data entry fields on the Income Details Form are "grayed out", as seen on the next page. To add new Income information, the user must click the **New** Button on the Income Form to gain access to these fields. (**NOTE:** Only one Income Details record can be added for each parcel.)

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
2	4	Far Oaks/Park Oaks/Timberline/Old Creek	3 Bedroom	795 2 B
3	3	Stonecrest	3 Bed / 3 Bath Flat	1050 2 B
4	3	Whistlebury Walk	2 Bed TH	950 3 B
5	4	Woodsong	3 Bed / 3 Bath	1140 3 B
6	4	Creekstone	2 Bed / 2 Bath	650 1 B

Valuation Details

	Base	Adj	Final	Units	Income
One Bed	0	0 %	0	0	0
Two Bed	0	0 %	0	0	0
Three Bed	0	0 %	0	0	0
Four Bed	0	0 %	0	0	0
Five Bed	0	0 %	0	0	0
Six Bed	0	0 %	0	0	0
\$ / SF	0.00	0 %	0.00	0	0
\$ / Room	0	0 %	0	0	0
GRM	0.00	0 %	0.00	0	0
Misc. Income	0			Reset	0
Vacancy %	0	0 %	0		0
Expenses %	0	0 %	0		0
Cap Rate	0.000	0 %	0.000		0
Comments	Reset				

Dig Class

☐ RES  
☐ AGR  
☐ COM  
☐ IND

PGI

EGI  
NOI  
Total Value  
Personal Value  
Real Value  
Land Value  
Imp Value

☐ Income as Parcel Current Value

Model Term *Annual*

Cancel Delete New Apply OK

The existing Income Models display in the list box at the top of the Form. When adding any property on the Income Details Form, the correct Model Type must first be selected from this list.

After clicking the New Button the user must first select the correct Model Type, as mentioned earlier, in the list box at the top of the Income Details Form. Selecting the Model Type will display the appropriate data entry fields on the Income Details Form for that Model Type, as shown on the next page, where the Income Model that is selected is a \$/SF Model type called Moss Point Manor.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
30	3	Athens Highlands	2 Bed/ 1 Bath (Lower)	615 2 B
31	4	Southampton New	3 Bed / 3.5 Bath w/Bsmt	975 2 B
32	3	Mi Casa	2 Bed/ 1 Bath	615 1 B
33	1	Moss Point Manor	One Bedroom	0 Tw
34	2	Cove Street Market Place	One Bedroom	0 Tw

**Valuation Details**

	Base	Adj	Final	Units	Income
3 Bedroom	0	0 %	0	0	0
2 Bedroom	0	0 %	0	0	0
Three Bedroom	0	0 %	0	0	0
Four Bedroom	0	0 %	0	0	0
Five Bedroom	0	0 %	0	0	0
Six Bedroom	0	0 %	0	0	0
\$ / SF	2.00	0 %	0.00	0	0
\$ / Room	0	0 %	0	0	0
GRM	0.00	0 %	0.00	0	0
Misc. Income	0			Reset	
Vacancy %	50	0 %	0		
Expenses %	25	0 %	0		
Cap Rate	1.000	0 %	0.000		
Comments	Reset				

**Dig Class**

☐ RES  
☐ AGR  
☐ COM  
☐ IND

**PGI**

0 EGI  
0 NOI  
0 Total Value  
0 Personal Value  
0 Real Value  
16,000 Land Value  
0 Imp Value

☐ Income as Parcel Current Value

Model Term: Annual

Cancel Delete New Apply OK

The user then adds the remaining data and/or adjustments required to generate an Income Value for the property. A discussion of all fields on the Income Details Form follows.

### Valuation Details section

- **Unit Description/Base Rate:** Directly beneath the Valuation Details heading on the Income Details Form are the Unit Descriptions and Base rates. This information is taken from the Income Schedule for that Income Model Type. These items are not accessible on the Income Details Form. Depending on the Model Type, the appropriate field(s) will be completed from schedule information. For example, under the \$ / SF Model Type the Base amount will be placed on the \$/SF row as shown above.
- **Adj:** An appraiser determined adjustment for this particular property can be keyed here. The expression should be expressed as a percentage with no decimal places.
- **Final:** The Base Rate multiplied times any adjustment will produce the Final value for that individual type.
- **Units:** The number of Units in the property that are of that type.
- **Income:** The total Income from that type. The Income is generated by WinGAP using the following formula:  $\text{Base} \times \text{Adj} \times \text{Units}$ .
- **Misc. Income:** Any miscellaneous income derived from the property.
- **PGI:** The Potential Gross Income is calculated by WinGAP based on the Model Type and data provided.

- **NOI:** The Net Operating Income is calculated by WinGAP based on the Model Type and data provided.
- **Total Value:** The Total Value represents the value of land and improvements based on the Model Type and data provided.
- **Personal Value:** Any personal property value that should be deducted from the Total Value should be entered in this field.
- **Real Value:** The Real Value is calculated by subtracting Personal Value from Total Value.
- **Land Value:** The land value that the Income property resides on. The Land Value is taken from the Fair Market Value of the land which is generated from the land schedules and land characteristics.
- **Imp Value:** The Real Value minus the Land Value. The Land Value and Imp Value are separated to conform with Georgia Code which requires that land and improvement values be separated for digest purposes.

### Income as Current Value checkbox

This box should be checked if the Income Value is to be placed on the digest. If the box is checked, the user will see the text **Income** highlighted in red to the right of the Current Value field on the Real Property General Information Form.

### Reset Buttons

The Reset Buttons beneath the **Adj** and **Units** fields can be clicked to reset the values in those fields to zero and quickly restart the Income valuation process.

### Dig Class Checkboxes

The appropriate Digest Class for the Income property can be selected by clicking in one of the **Dig Class** checkboxes.

### Comments

Any comments about this Income property can be entered in this field.

### Model Term (Annual/Monthly)

The Income Model Term displays on the lower left of the Income Details Form. If the Monthly Rate option is checked on the Income Model Form for that Model, the Model Term will be Monthly; otherwise it will display as Annual.

### \$ / SF Income Model Type

After all the information is added and the user clicks apply, the Income Details Form for the **\$ /SF Income Model Type**, Model Type 1, appears as shown on the next page.



WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
30	3	Athens Highlands	2 Bed/ 1 Bath (Lower)	615 2 B
31	4	Southhampton New	3 Bed / 3.5 Bath w/Bsmt	975 2 B
32	3	Mi Casa	2 Bed/ 1 Bath	615 1 B
33	1	Moss Point Manor	One Bedroom	0 Tw
34	2	Cove Street Market Place	One Bedroom	0 Tw

**Valuation Details**

	Base	Adj	Final	Units	Income
3 Bedroom	0	0 %	0	0	0
2 Bedroom	0	0 %	0	0	0
Three Bedroom	0	0 %	0	0	0
Four Bedroom	0	0 %	0	0	0
Five Bedroom	0	0 %	0	0	0
Six Bedroom	0	0 %	0	0	0
\$ / SF	2.00	0 %	2.00	20,000	40,000
\$ / Room	0	0 %	0	0	0
GRM	0.00	0 %	0.00	0	40,000
Misc. Income	0			Reset	20,000
Vacancy %	50	0 %	50		15,000
Expenses %	25	0 %	25		1,500,000
Cap Rate	1.000	0 %	1.000		0
Comments	Reset				1,500,000
					0
					1,500,000

**Dig Class**
☐ RES  
☐ AGR  
☒ COM  
☐ IND

PGI  
20,000  
15,000  
1,500,000  
0  
1,500,000  
0  
1,500,000  
☐ Income as Parcel Current Value

EGI  
NOI  
Total Value  
Personal Value  
Real Value  
Land Value  
Imp Value

Model Term    Annual

Cancel    Delete    New    Apply    OK

## \$ / Room Income Model Type

The Income Details Form for a \$ / Room Income Model Type, Model Type 2, would appear similar to the one below.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
32	3	Mi Casa	2 Bed/ 1 Bath	615 1 B
33	1	Moss Point Manor	One Bedroom	0 Tw
34	2	Cove Street Market Place	One Bedroom	0 Tw
35	1	Arbor Station	One Bedroom	0 Tw

**Valuation Details**

	Base	Adj	Final	Units	Income	Dig Class
3 Bedroom	0	0 %	0	0	0	<input type="checkbox"/> RES
2 Bedroom	0	0 %	0	0	0	<input type="checkbox"/> AGR
Three Bedroom	0	0 %	0	0	0	<input checked="" type="checkbox"/> COM
Four Bedroom	0	0 %	0	0	0	<input type="checkbox"/> IND
Five Bedroom	0	0 %	0	0	0	
Six Bedroom	0	0 %	0	0	0	
\$ / SF	0.00	0 %	0.00	0	0	
\$ / Room	1,000	0 %	1,000	50	50,000	
GRM	0.00	0 %	0.00	0	50,000	
Misc. Income	0			<input type="button" value="Reset"/>	12,500	PGI
Vacancy %	75	0 %	75		6,250	EGI
Expenses %	50	0 %	50		500,000	NOI
Cap Rate	1.250	0 %	1.250		500,000	Total Value
Comments	<input type="button" value="Reset"/>				0	Personal Value
					500,000	Real Value
					0	Land Value
					500,000	Imp Value

☐ Income as Parcel Current Value

Model Term *Annual*

## \$ / Bedroom Income Model Type

The Income Details Form for a \$ / Bedroom Income Model Type, Model Type 3, would appear similar to the one below.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
2	4	Fair Oaks/Park Oaks/Timberline/Old Creek	3 Bedroom	795 2 B
3	3	Stonecrest	3 Bed / 3 Bath Flat	1050 2 B
4	3	Whistlebury Walk	2 Bed TH	950 3 B
5	4	Woodsong	3 Bed / 3 Bath	1140 3 B
6	4	Creekstone	2 Bed / 2 Bath	650 1 B

**Valuation Details**

	Base	Adj	Final	Units	Income	Dig Class
3 Bedroom	1,050	0 %	12,600	25	315,000	<input type="checkbox"/> RES
2 Bedroom	800	0 %	9,600	50	480,000	<input type="checkbox"/> AGR
Three Bedroom	0	0 %	0	0	0	<input checked="" type="checkbox"/> COM
Four Bedroom	0	0 %	0	0	0	<input type="checkbox"/> IND
Five Bedroom	0	0 %	0	0	0	
Six Bedroom	0	0 %	0	0	0	
\$ / SF	0.00	0 %	0.00	0	0	
\$ / Room	0	0 %	0	0	0	
GRM	0.00	0 %	0.00	0	795,000	PGI
Misc. Income	0			Reset	755,250	EGI
Vacancy %	5	0 %	5		453,150	NOI
Expenses %	40	0 %	40		4,898,919	Total Value
Cap Rate	9.250	0 %	9.250		0	Personal Value
					4,898,919	Real Value
					0	Land Value
					4,898,919	Imp Value

Comments:

☐ Income as Parcel Current Value

Model Term: *Annual*

Buttons: Cancel, Delete, New, Apply, OK

## GRM Income Model Type

Finally, the Income Details Form for a **GRM Income Model Type**, Model Type 4, would appear similar to the one shown below.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
11	4	Scenic Hills	2 Bed / 2.5 Bath TH	750 Tw
12	4	Victorian Village	2 Bed / 2.5 Bath TH	625 Tw
13	4	Southhampton	4 Bed	1200 5 B
14	4	Magnolia Station	2 Bed / 1 Bath	425 Tw
15	4	Hancock Rental Houses	3 Bed / 2 Bath	900 3 B

Valuation Details

	Base	Adj	Final	Units	Income	Dig Class
3 Bedroom	625	0 %	625	25	15,625	<input type="checkbox"/> RES
2 Bedroom	0	0 %	0	0	0	<input type="checkbox"/> AGR
Three Bedroom	0	0 %	0	0	0	<input checked="" type="checkbox"/> COM
Four Bedroom	0	0 %	0	0	0	<input type="checkbox"/> IND
Five Bedroom	0	0 %	0	0	0	
Six Bedroom	0	0 %	0	0	0	
\$ / SF	0.00	0 %	0.00	0	0	
\$ / Room	0	0 %	0	0	0	
GRM	72.00	0 %	72.00	0	15,625	PGI
Misc. Income	0			Reset	15,625	EGI
Vacancy %	0	0 %	0		15,625	NOI
Expenses %	0	0 %	0		1,125,000	Total Value
Cap Rate	0.000	0 %	0.000		0	Personal Value
					1,125,000	Real Value
					0	Land Value
					1,125,000	Imp Value
Comments	Reset				<input type="checkbox"/> Income as Parcel Current Value	

Model Term *Annual*

Cancel Delete New Apply OK

## Income as Current Value checkbox

As mentioned earlier, if the Income Value is to be used as the Parcel Current Value, a checkmark should be placed in the Income as Current Value checkbox at the bottom right of the Income Details form, as seen below.

WinGAP - Income Details

MODELKEY	MODELTYPE	DESCRIP	BED1_DESC	BED1 BE
11	4	Scenic Hills	2 Bed / 2.5 Bath TH	750 Tw
12	4	Victorian Village	2 Bed / 2.5 Bath TH	625 Tw
13	4	Southampton	4 Bed	1200 5 B
14	4	Magnolia Station	2 Bed / 1 Bath	425 Tw
15	4	Hancock Rental Houses	3 Bed / 2 Bath	900 3 B

**Valuation Details**

	Base	Adj	Final	Units	Income	Dig Class
3 Bedroom	625	0 %	625	25	15,625	<input type="checkbox"/> RES
2 Bedroom	0	0 %	0	0	0	<input type="checkbox"/> AGR
Three Bedroom	0	0 %	0	0	0	<input checked="" type="checkbox"/> COM
Four Bedroom	0	0 %	0	0	0	<input type="checkbox"/> IND
Five Bedroom	0	0 %	0	0	0	
Six Bedroom	0	0 %	0	0	0	
\$ / SF	0.00	0 %	0.00	0	0	
\$ / Room	0	0 %	0	0	0	
GRM	72.00	0 %	72.00	0	15,625	PGI
Misc. Income	0			Reset	15,625	EGI
Vacancy %	0	0 %	0		15,625	NOI
Expenses %	0	0 %	0		1,125,000	Total Value
Cap Rate	0.000	0 %	0.000		0	Personal Value
Comments	Reset				1,125,000	Real Value
					0	Land Value
					1,125,000	Imp Value

☒ Income as Parcel Current Value

Model Term *Annual*

Cancel Delete New Apply OK

The Income Value will be used as the Current Value of the Parcel, and will be displayed in the Current Value and Curr-MAV fields in the Values section on the Real Property General Information form, next page.

WinGAP - Real Property General Information - A & D ELECTRIC : 997 997

<< Top < Prev **Next >** End >> Account Number 13281 Duplicate ☒ Notice ☐ Special District

PIN (2) 997 - -997 - Tax District 01 - Unincorporated

Alt PIN Asmt Reason New Commercial Improvement Added

### Street Information

House #	Ext	Dir	Units	Street Name
0				

Type	Quad	Latitude	Longitude	Zip Code
				-

### Property Information

LL ☐ LD ☐ GMD ☐ Zoning

Legal :

Neighborhood

Lendor  Total Acres 2.00

Subdivision

Lot  Blk  Sec  Phse

### Exemption Information

Homestead S0 HS App Date / /

#### Floating Homestead

Original	0
Current	0
State HS Val	0
BOE Value	0
BOE Year	0

### Values

Previous	16,000	<input type="button" value="Edit"/>
Current	1,125,000	<b>Income</b>
Return	0	
Curr-MAV	1,125,000	
Prev-MAV	16,000	<input type="button" value="Edit"/>

### History

2008	0
2007	0
2006	0

	FMV	MAV
Land (1)	16,000	16,000
Res Imp	0	0
Com Imp (1)	1,298,770	1,298,770
Acc Imp	0	0

### Edit Information

Data Entry Nologin

Review / /

Appraiser

Alternate

Comments

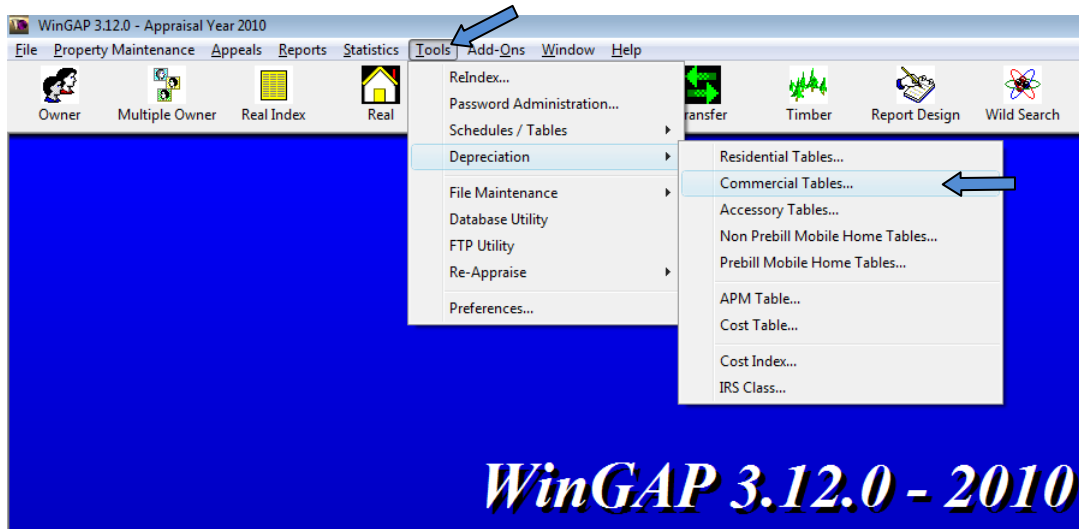
The text **Income** will be highlighted in red to the right of the Current Value field on the Real Property General Information Form.

## Depreciation

Commercial improvement depreciation factors are found in a depreciation table that is created and maintained by the appraiser. The table can be accessed through the WinGAP menus and consists of age increments with life expectancies.

### Depreciation Menu

Access to the commercial depreciation table is via the **Tools >> Depreciation >> Commercial Tables** menu option as shown below.



### Commercial Depreciation

The Commercial Depreciation table appears as shown below:

WinGAP - Depreciation - Commercial

Grade-Frame-Age	Grade-Frame-Age	Grade-Frame-Age
100-A- 1	100-A- 20	100-A- 39
100-A- 2	100-A- 21	100-A- 40
100-A- 3	100-A- 22	100-A- 41
100-A- 4	100-A- 23	100-A- 42
100-A- 5	100-A- 24	100-A- 43
100-A- 6	100-A- 25	100-A- 44
100-A- 7	100-A- 26	100-A- 45
100-A- 8	100-A- 27	100-A- 46
100-A- 9	100-A- 28	100-A- 47
100-A- 10	100-A- 29	100-A- 48
100-A- 11	100-A- 30	100-A- 49
100-A- 12	100-A- 31	100-A- 50
100-A- 13	100-A- 32	100-A- 51
100-A- 14	100-A- 33	100-A- 52
100-A- 15	100-A- 34	100-A- 53
100-A- 16	100-A- 35	100-A- 54
100-A- 17	100-A- 36	100-A- 55
100-A- 18	100-A- 37	100-A- 56
100-A- 19	100-A- 38	100-A- 57

**Depreciation Group**

Grade: 1.00  
Frame:  
Age: 1

**Depreciation Factors**

5:	10:	15:	20:	25:
0.00	0.00	0.96	0.96	0.97
30:	35:	40:	45:	50:
0.98	0.99	0.99	0.99	0.99
55:	60:	65:	70:	75:
1.00	1.00	1.00	1.00	0.00

Help Cancel New Delete Apply OK

As stated above, the table consists of age increments and associated life expectancies ranging from 5 to 75 years. Grades will always be 1.00 since the lookup in the table is based only on the age and life expectancy. Depreciation factors assigned to the life expectancies should represent percent good.

As many age increments as needed can be added. It is not necessary for age to be in increments of 1. If larger increments are used, an interpolation routine is used to determine the depreciation factor for an age that falls between two increments. Following are the steps used in the interpolation routine.

1. **Depr Increment = abs(Depr from Lower Age Level – Depr from Higher Age Level)**
2. **Inc Factor = Depr Inc / abs(Higher Age Level – Lower Age Level) {rnd to 2 dec}**
3. **Depr Adj = (Act Age – Lower Age Level) \* Inc Factor {rnd to 2 dec}**
4. **Calc Dep = Depr from Lower Age Level – Depr Adj**

Following is an example of interpolating depreciation using a commercial improvement with an age of 7 and a depreciation table with a 5 year age level with depreciation of 95 and a 10 year age level with depreciation of 82.

Age	Depr Factor
5	.95
10	.82

Dep Increment =  $.95 - .82 = .13$   
 Inc Factor =  $.13 / \text{abs}(10 - 5) = .13 / 5 = .03$  {round to 2 dec}  
 Depr Adj =  $(7 - 5) * .03 = 2 * .03 = .06$  {round to 2 dec}  
 Calc Dep =  $.95 - .06 = .89$

New entries are made to the depreciation table by

- ☐ Clicking New
- ☐ Entering 1.00 in Grade
- ☐ Entering appropriate data in Age and Depreciation Factors
- ☐ Clicking Apply to save.

Existing information can be modified by

- ☐ Selecting the appropriate grade-age combination from the list
- ☐ Modifying the data
- ☐ Clicking Apply to save.

Depreciation Table entries can be removed by selecting the grade-age combination from the list and clicking Delete.



# Commercial/Industrial Improvement Calculations

The formula for calculating the value of a commercial/industrial structure is as follows:

**Comm Base Cost \* Used As Cost \* St Ht Mod \* Wall Ht Mod \* A/P Mod \* Const Cost Mod =  
\$/Sq Ft before Adds (2)**

**\$/Sq Ft before Adds \* Grade = Adj \$/Sq Ft before Adds (6)**

**(((\$Found \* %Cov \*St Ht) + (\$WallFr\* %Cov \*St Ht) + (\$ExWall\* %Cov \*St Ht) + (\$RoofFr\*  
%Cov \*St Ht) + (\$RoofCv\* %Cov \*St Ht) + (\$FlrCon\* %Cov \*St Ht) + (\$FlrFin\* %Cov \*St Ht) +  
(\$IntWall\* %Cov \*St Ht) + (\$ClgFin\* %Cov \*St Ht) + (\$Wire\* %Cov \*St Ht) + (\$Light\* %Cov  
\*St Ht) + (\$HeatAc\* %Cov \*St Ht)) \* Grade = Adj \$Adds Sum (6)**

**Adj \$Adds Sum + Adj \$/Sq Ft before Adds = \$/Sq Ft (6)**

**\$/Sq Ft \* Bldg Base Area = RCN Structure Value**

**RCN Struc Value \* Phy Dep \* Econ Ob \* Func Ob \* Other \* Pct Comp \* Neighborhood Fac =  
Structure Value**

**If Extra Feature is valued by the Sq Ft.....**

**Comm Base Cost \* Used As Cost \* Rank Mult \* Area = Raw EF Value  
Raw EF Value \* Grade \* Phy Dep \* Econ Ob \* Func Ob \* Other \* Pct Comp \* Nghbd Fac = EF  
Value**

**If Extra Feature is valued by the Lump Sum.....**

**Unit Dollars \* Rank Mult \* Num of Units = Raw EF Value  
Raw EF Value \* Grade \* Phy Dep \* Econ Ob \* Func Ob \* Other \* Pct Comp \* Nghbd Fac = EF  
Value**

**If Extra Feature value is Overridden.....**

**Override Value = OV EF Value**

**Sum of EF Value + OV EF Value = Tot EF Value**

**Structure Value + Tot EF Value = Bldg/Section FMV**

An explanation of some of the above calculation variables follows below:

**Comm Base Cost ...** The commercial Bldg Base Cost that is found in Preferences.

**Used As Cost ...** The **Used As Cost** is found in the Commercial Base Schedule and labeled as Base Cost. For extra features, the modifier is found on the Extra Feature schedule and is also labeled as Base Cost.

**St Ht Mod ...** The Story Height Modifier can be located in Improvement Labels schedule.

**Wall Ht Mod ...** The adjustment that is made for the average wall height of the structure. If the structure is multi-storied, the average wall height is the total height of the building divided by the number of stories. The **Wall Ht Mod** is found in the Wall Height schedule. If a wall height is not

found in the table, the adjustment is the modifier assigned to the lower of the table wall heights that the lookup is found to be between.

**A/P Mod ...** The area/perimeter adjustment is found in the Area / Perimeter schedule. The lookup in the table is an area to perimeter ratio. The base area of the building is divided by the base area perimeter producing a ratio or lookup argument. The ratio is NOT rounded. Instead, only the integer portion of the A/P ratio is used in the lookup. If the ratio falls between two values, the modifier associated with the higher argument is used.

**Const Cost Mod ...** The Construction Cost Modifier is found in the Commercial Base schedule and is identified as one of the Construction Cost Modifiers. The type of building construction and associated code dictates which modifier to use.

**\$Found, \$WallFr, etc ...** These represent dollar per square foot adjustments that are made to the structure based on the structural elements, their quality assignment, and the value placed in the Structural Components schedule.

**Bldg Base Area ...** The ground floor area of the structure or section that is being valued.

**Rank Mult ...** The rank multiplier is used to adjust the value of an extra feature based on the quality. The multiplier is found in the Rank schedule. The codes distinguish various categories of extra feature quality classes that are established by the appraiser.

**Lump Sum Value ...** The lump sum value is the value of an extra feature that is found in the Lump Sum Extra Features schedule. This table should not to be confused with the Extra Features base schedule. The value found in the Lump Sum Extra Features schedule is expressed as a dollar amount which has been adjusted for point cost.

## Classroom Example

Using the schedules in the Appendix and the worksheets on the following pages, the calculation process can be illustrated using a building with the following characteristics:

Item	Value
Use	Bank - Branch
Construction Type	Con Blk with Brick Veneer(Type 4)
Story Height	2.0
Area	5000 sf on ground floor
Perimeter	350'
Bldg Height	28'
Floor Covering	Carpet & Tile – Avg Quality
Heat	Cent Heat / AC – Avg Quality
Grade	100
Year Built	1985
Canopy	600 sf with a rank of Average

## Commercial/Industrial Improvement Calculation Worksheet (Classroom Example)

A blank worksheet that can be used as a guide in the valuation of commercial/industrial improvements can be found on pages 53-54. Additional worksheets are also on pages 103-110 and in the handout called Commercial Pricing Worksheets. Numbers in parenthesis indicate the decimal positions to which the calculated value must be rounded in order to produce the exact value generated by the WINGAP calculation routine. The example below, as entered in WinGAP, is shown on page 55.

Comm Base Cost		1.00
Used As Cost (pg 114)	X	83.00
St Ht Mod (pg 125)	X	1.80
Wall Ht Mod (low end) (pg 118)	X	1.06
A/P Mod (high end) (pg 116)	X	1.02
Const Cost Mod (pg 114)	X	.95
\$/Sq Ft before Adds (2)	=	153.45
Grade	X	1.00
Adj \$/Sq Ft before Adds (6)	=	153.450000
\$Total Adj Adds (6)	+	12.960000
\$Sq Ft (6)	=	166.410000
Bldg Base Area	X	5000
RCN Structure Value (0)	=	832,050
Phy Dep	X	.85
Econ Obsol	X	1.00
Func Obsol	X	1.00
Other Factor	X	1.00
Pct Complete	X	1.00
Neighborhood Factor	X	1.00
Structure Value (0)	=	707,243
Extra Feature Value	+	2,550
Bldg/Section Value	=	709,793
FMV (0)		709,793

### Adds Sum Calculations (Classroom Example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish (pg 120)	2.70	X	1.00	X	1.80	=	4.86
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC (pg 120)	4.50	X	1.00	X	1.80	=	8.10
<b>Total Adds</b>						Σ	12.96
<b>Grade</b>						X	1.00
<b>Adj Adds (6)</b>						=	12.960000

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
1.00	X	5.00	X	1.00	X	600	=	3000	X	1.00	X	.85	=	2550
	X	(Pg 122)	X		X		=		X		X		=	
	X		X		X		=		X		X		=	
	X		X		X		=		X		X		=	
	X		X		X		=		X		X		=	
	X		X		X		=		X		X		=	
	X		X		X		=		X		X		=	

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=		X		X		=	

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=		X		X		=	
	X		X		=		X		X		=	
	X		X		=		X		X		=	
	X		X		=		X		X		=	
	X		X		=		X		X		=	
	X		X		=		X		X		=	
	X		X		=		X		X		=	

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		2550
OV EF Values	+	
Total EF Values	=	2550

## Commercial/Industrial Improvement Calculation Worksheet

Comm Base Cost		
Used As Cost	X	
St Ht Mod	X	
Wall Ht Mod (low end)	X	
A/P Mod (high end)	X	
Const Cost Mod	X	
\$/Sq Ft before Adds (2)	=	
Grade	X	
Adj \$/Sq Ft before Adds (6)	=	
\$Total Adj Adds (6)	+	
\$/Sq Ft (6)	=	
Bldg Base Area	X	
RCN Structure Value (0)	=	
Phy Dep	X	
Econ Obsol	X	
Func Obsol	X	
Other Factor	X	
Pct Complete	X	
Neighborhood Factor	X	
Structure Value (0)	=	
Extra Feature Value	+	
Bldg/Section Value	=	
FMV (0)		

### Adds Sum Calculations (example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish		X		X		=	
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC		X		X		=	
<b>Total Adds</b>						Σ	
<b>Grade</b>						X	
<b>Adj Adds (6)</b>						=	

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		
OV EF Values	+	
Total EF Values	=	

The appraiser can visualize and follow the WinGAP pricing for the Classroom Example, above, after data entry is completed by clicking on the Pricing button on the Commercial Improvement screen, as shown in the example below.

WinGAP - Commercial Improvements - 1 of 1: 997 997

Improv No: 1 Section No: 1 Imp: 1 Sec: 1 Key: 560 0220: BANK - BRANCH

Parcel No.: 997 - .997 - Const Type: Wood/Steel Comb Area: 5,000

Class: Commercial Life Exp: 45 Sch LE: 45 Perimeter: 350

Strat: Improvement Wall Hght: 14 Story Height: 2.0 Story

Used As: BANK - BRANCH Year Built: 1985 Common Wall: 0

Built As: BANK - BRANCH Eff YR Built: Section Area: 10,000

Total Bldg Area: 10,000

**Value Adjustments**

Grade: 100

Phy Dep: 0.85

Phy Dep Ovr: 0.00

Econ Obsl: 1.00

Func Obsl: 1.00

Other Fact: 1.00

Pct Comp: 1.00

Neighborhood: 1.00

**Value Information**

	MAV	Ovr
Structure	707,243	707,243
Extra Features	2,550	2,550
Identical Units	1	
Section	709,793	709,793
Override	0	
Imp Value	709,793	

Ovr Rep: / /

Ovr Date: / /

Last Calc: 709,793

**Plumbing (Descriptive Only)**

One Fixture	0	Bath/Kitchen 0
Two Fixture	0	1.5 Bath/Kitchen 0
Three Fixture	0	2 Bath/Kitchen 0

**Comments**

State Homestead ☐

House No Ext Dir Units Street Name Type Quad Appraiser

0

Edit History Cancel New Delete Apply OK

After clicking on the Pricing button, the appraiser is presented a screen showing the calculation details associated with the structure.

WinGAP - Commercial Pricing

Used As Code:	0220	Foundation	0.0	Grade	100
Built As Code	0220	Wall Framing	0.0	Phy	0.85
Building Type	015	Exterior Walls	0.0	Ovr Phy	0.00
Depr Year	2001	Roof Framing	0.0	Econ	1.00
Base Cost	1.00	Roof Cover	0.0	Func	1.00
Point Cost	100.00	Floor Construction	0.0	Other	1.00
Area	5000	Floor Finish	4.86	% Complete	1.00
Perimeter	350	Interior Walls	0.0	Neighborhood	1.00
Story Height Factor	1.8000	Ceiling Finish	0.0	Total Structure Points	153.45
Wall Height	1.06	Wiring	0.0	Structure RCN	832050
Area / Perimeter	1.02	Lighting	0.0	Structure Value	707243
Construction Cost	0.95	Heat / AC	8.10	Extra Feature Value	2550
Used As Modifier	83.000000	Total Adds	12.96	FMV	709793

Done

The above information could be of assistance when explaining the calculation process to another party or in determining the cause of a problem in the improvement's value.

## Development of Commercial / Industrial Improvement Schedules

The development of improvement schedules for commercial and industrial properties requires the appraiser to decide certain issues upfront. One of the issues in question is the assignment of codes for building types, extra feature rankings, life expectancy, quality classes for adds, and construction class. The other issue is the basis on which the commercial/industrial base values are established.

### Building Types

The various types of buildings will need to be grouped into homogeneous categories. Each homogeneous category will be entered via the **Tools >> Schedules / Tables >> Commercial Improvements >> Building Type** option within the data entry field *Description*. These Building Type categories must be established before the base schedule or any other tables can be built. An example of Building Types can be found in the table below. The code is assigned by WinGAP.

Description	Code
Apartments, Clubs, Hotels	11
Dwellings, Duplex, Motels	12
Stores, Commercials	13
Garages, Industrials, Lofts, Warehouses	14
Offices, Medical & Public Bldgs	15
Churches, Theaters, Auditoriums	16
Sheds & Barns	17
Schools & Classrooms	18

### Life Expectancy Codes

Life Expectancy Codes and associated years that affect the amount of depreciation calculated are found on the **Tools >> Schedules / Tables >> Commercial Improvements >> Base Schedule** Menu. They are located on the screen in the **Life Expectancy** section. Usually, the life expectancy code 1 is tied to the Construction Cost code and the Life Expectancy value represents the longevity of the respective Construction Cost type. Example of codes and years can be found below.

Code	Years
1	50
2	45
3	40
4	35
5	30

### Construction Class

The next coding scheme that should be decided prior to the building of the commercial/industrial improvement schedules is that of construction class. The construction class codes allow the appraiser the opportunity to adjust building values based on the type of construction. Multipliers or adjustments can be assigned to each code that will assist in the generation of the proper Fair Market Value. The Construction Class codes range from 1 to 5. A class code of 1, normally, represents the most expensive category of construction; with 5 being reserved for the cheapest



construction type. The adjustments assigned to the codes can be entered through the **Tools >> Schedules / Tables >> Commercial Improvements** Menu using the **Base Schedule** option. They are identified as Construction Cost Modifiers on the data entry screen. An example of construction cost descriptions along with codes and modifiers can be found below.

General Definition	WinGAP Definition	Code	CC Mod
High rise buildings, superlative construction, extreme fireproofing	Heavy Structural Steel	1	1.50
Superlative construction, fireproofing, generally multi-story with the exception of specialty buildings	Reinforced Concrete	2	1.45
Solid brick or heavy concrete block, load bearing walls	Masonry Load Bearing Walls	3	1.00
Brick veneer, frame, light concrete block	Wood/Steel Combustible	4	.90
Light Steel, prefab metal bldgs	Prefab Structural Steel	5	.85

## Quality Class

Quality class codes for Structural Components are used to distinguish between various quality categories for these structure additions (or Adds), such as floor covering, heating, etc. Each code will be assigned a square foot value that will be added to the base value. The codes range from 1 to 5 with 1 being the lowest quality rating and 5 the highest quality. Values are assigned to the various structural elements and the associated code through the **Tools >> Schedules / Tables >> Commercial Improvements** Menu using the **Structural Elements** option. The Building Types used with Commercial Adds will be discussed later. An example of a structural addition is shown below.

### Component: Floor Finish Menu Item: Carpet / Vinyl Tile

Quality code	\$/Sq Ft
1	1.10
2	1.70
3	2.50
4	3.70
5	5.00

## Extra Features

Extra feature ranking codes range from 1 to 9 and A to Z. Generally, code 1 represents the excellent category with the highest multiplier. The hierarchy of codes and associated multipliers is at the discretion of the appraiser. An example of the codes and associated multipliers can be found in the table below.

1 – Excellent	1.40
2 – Good	1.20
3 – Average	1.00
4 – Fair	.80
5 – Poor	.60

The multipliers would be entered via the **Rank** screen found on the **Tools >> Schedules / Tables >> Commercial Improvements >> Rank** Menu.

## Base Value Determination

After all of the above is decided, the appraiser must then begin the process of determining a base value for the building, the schedule adjustments for heating/air, floor covering, etc., assignment of multipliers for the various modifiers that need be accounted for, and the values for any extra features that might be added to the commercial tables. If a cost manual is being used, local and current cost adjustments must be made to any values when applicable.

After the decision of code assignments is made, the appraiser will need to determine the basis on which to establish the base values for each of the different buildings that will be added to the schedule. The basis involves what is to be included in the base value. The appraiser can include a certain set of "standard" structural element characteristics, such as heat and air, carpet on the floors, 2 baths, etc., and allow for deductions or additions in those buildings that may have less than the standard complement of characteristics. If this method, known as the Calculator Cost method, is used, the appraiser must develop and maintain documentation to insure that anyone using the system would be aware of what is included in the base value.

Another method the appraiser could employ would be to include nothing as standard in the building with the exception of the primary structural elements, such as floor construction, exterior walls, roofing, etc. With this method which is known as the Segregated Cost method, the amount of detailed documentation would be reduced since basically all elements outside of the primary construction elements are treated as additions to value.

After the method is selected, the appraiser must then determine which construction class will be the basis for schedule values. Generally, the most prevalent construction type in the county would be chosen as the base type or class. The selection and consistent application of the selection will allow the user to systematically develop the construction class modifiers mentioned above. Documentation would also be reduced to a single sentence defining the chosen class that will be applied to all buildings.

The following example illustrates the process that one might undertake to develop a schedule entry for a commercial office building. In this scenario, the appraiser has chosen to use the method whereby only the primary structural elements are incorporated in the base value. Add values will be calculated for the remaining elements and associated characteristics. The Pricing Manual will form the basis for the calculations. The base construction class is a C-Average. A copy of the referenced pages can be found in the handout entitled WinGAP Commercial Pricing Schedules.

From the page **Section 15 Page 17** (Page 2 in the WinGAP Commercial Pricing Schedules handout), it is determined that the value in the cost manual is \$56.62 per square foot. Reading the description for the C-Average office, the appraiser notes that the base floor covering is **vinyl composition**. "Adequate plumbing" is the stated standard for plumbing which could be interpreted as 2 two-fixture baths. Forced air is the heating and air standard.

The \$56.62 must now be adjusted for locale and current cost. The current cost adjustment can be found on **Section 99 Page 3** (Page 3 in the WinGAP Commercial Pricing Schedules handout). Being in the Eastern part of the country and using a building from **Section 15, Class C** our current cost modifier is 1.04. The local multiplier of .91 is found on **Section 99 Page 7** (Page 4 in the WinGAP Commercial Pricing Schedules handout) under Georgia, the Macon area, Class C. The current cost and local multipliers are applied to the \$56.62 to produce an adjusted value of \$53.59.

$$\text{\$56.62} * 1.04 * .91 = \text{\$53.59}$$

The floor covering, plumbing, and heat/air are the items that are going to be adjustments in the Adds section of our commercial tables so deductions from the base value must be made. Using the Segregated Cost Section of the manual, base value deductions for the above mentioned items can be determined. In the Segregated Cost Section the appraiser will find a listing of the structural elements and their varying types. Also, the types will be quality classed into 4 different

categories. A decision must be made as to what quality class will be used. In this example, category 2 will form the basis for our calculations.

**Section 45 Page 2** (Page 5 in the WinGAP Commercial Pricing Schedules handout) should be referenced for the floor covering of vinyl composition tile deduction. The vinyl composition tile category 2 has a value of \$1.44.

This value must also be adjusted for current cost conditions and locale. The current cost multiplier of 1.04 can be found on **Section 99 Page 3** (Page 3 in the WinGAP Commercial Pricing Schedules handout) under the Segregated Cost Section 45, Eastern area, Class C. The local cost multiplier of .91 is found on **Section 99 Page 7** (Page 4 in the WinGAP Commercial Pricing Schedules handout) under Georgia, Macon area, Class C. The application of the multipliers would be as follows:

$$\text{\$1.44} * 1.04 * .91 = \text{\$1.36}$$

The heating deduction is found on **Section 45 Page 4** (Page 7 in the WinGAP Commercial Pricing Schedules handout). The forced air value for quality 2 is \$3.15. The value adjusted using the same current cost and local multipliers as floor covering is \$2.98.

$$\text{\$3.15} * 1.04 * .91 = \text{\$2.98}$$

The final deduction in our example that will be calculated is for plumbing that is found on **Section 45 Page 4** (Page 7 in the WinGAP Commercial Pricing Schedules handout) under Office Buildings. The amount is \$3.17 that must also be adjusted for current cost and locale, producing the adjusted deduction of \$3.00.

$$\text{\$3.17} * 1.04 * .91 = \text{\$3.00}$$

The value that will be placed in the Commercial Base schedule can now be determined.

Item	Value		Current Cost		Local		Adj Value	Action
Base Value	56.62	X	1.04	X	.91	=	53.59	
Floor Covering (Vinyl Composition)	1.44	X	1.04	X	.91	=	1.36	Minus
Heating (Forced Air)	3.15	X	1.04	X	.91	=	2.98	Minus
Plumbing	3.17	X	1.04	X	.91	=	3.00	Minus
Base Schedule Value							46.25	Sum

The Base Schedule Value of \$46.25 can now be entered in the Commercial Tables, Base Schedule, Base Cost field. Also, the Building Type of 15 for the office can be entered on the same screen.

Construction Class modifiers for the office can be calculated and entered on the **Base Schedule** screen. This calculation involves comparing the values on **Section 15 Page 17** (Page 2 in the WinGAP Commercial Pricing Schedules handout) for each of the different construction types. The class modifier for an A would be calculated by dividing the A -Average value by the C – Average value. The table on the next page contains the calculations for the construction class modifiers in our example.

Class	Type	Cost	/	Base Cost	=	Cost Modifier
A (1)	Average	82.65		56.62		1.46
B (2)	Average	79.27		56.62		1.40
C (3)	Average	56.62		56.62		1.00
D (4)	Average	53.57		56.62		0.95
S (5)	Average	50.47		56.62		0.89

The above Construction Class modifiers can be entered on the Commercial Tables, Base Schedule screen in the appropriate fields.

Life Expectancy values can also be found in the pricing manuals and entered on the Base Schedule screen. This would complete the entry of the office building to the commercial/industrial tables.

Structural Elements can now be added / modified for the Building Type. However, the Building Type must be setup through the **Building Types** option of the **Tools >> Schedules / Tables >> Commercial Improvements** Menu before Structural Elements can be added. If the Building Type is present and an item for a structural element exists, the value fields can be edited. **NEW** must be selected if a particular item is not found within a structural element. Dollar per square foot adjustments would be added for all elements desired. The adjustments would be calculated through the same means as the vinyl composition tile and forced air adjustments above. Plumbing would normally be treated as an extra feature lump sum item and added in the Extra Feature tables.

## Extra Features

Extra Features are items that are attached to the structure, add value to the structure, and cannot be treated as a structural element. Canopies, loading docks, porches, plumbing, and sprinklers are examples of items that would be considered as extra features. The list is certainly not limited to the items listed above. The appraiser has full flexibility in establishing the extra feature items, values, and method of calculation. The extra feature schedule can be modified on an as needed basis and completely customized for the user's needs. Extra Features must also be adjusted for current and local conditions if the origin of value is a cost manual.

An example of the addition of an extra feature item to a schedule would be sprinklers. Sprinkler cost information can be found in **Section 45 Page 3** (Page 6 in the WinGAP Commercial Pricing Schedules handout). Sprinkler costs are itemized by coverage. The appraiser could make several entries in the Extra Feature Table to accommodate the difference in value. However, in this example the 5000 square foot value in category 2 will be used. The value found in the cost table is \$2.52 per square foot. This must be adjusted for current cost and locale as shown below.

$$\text{\$2.52} * 1.04 * .91 = \text{\$2.38}$$

The sprinkler extra feature along with the cost of \$2.38 would be added to the Extra Feature Table as discussed previously in the Extra Feature section of Menus. The Comp # will be assigned by the appraiser. In this example, the code used will be SP1, allowing for multiple sprinkler entries. The description would be entered as Sprinkler - 5,000 sf. A value of \$2.38 would be entered in Base Cost. A Pricing Code of Square Foot would be assigned to the extra feature since it will be priced by the number of square feet. The screen on the following page illustrates the data entry.

WinGAP - Commercial Extra Features

Description	Comp #	Method	Table	Cost
BSMT (UNFIN)	X040	1	0	17.00
CANOPY	X010	1	0	14.00
DECK (WOOD)	X030	1	0	8.00
LOADING DOCK	X020	1	0	0.12
OVERHEAD DOORS	XOHD	1		10.00
PATIO	X060	1		4.00
PLUMBING FIX	X099	2	99	1.00
PORCH OPEN	X031	1	0	15.00
SPRINKLERS - 5000 sf	X200	1	0	2.38
SPRINKLERS - DRY	X201	1		3.00
UTILITY ROOM	X070	1		18.00

**Pricing Information**

Comp #   Description

Pricing Method  Base Cost

Plumbing would be an example of an extra feature that would be priced with a table entry. This requires a setup in the **Tools >> Schedules / Table >> Commercial Improvements >> Extra Features** as discussed earlier in the Extra Features menu section. The screens below and on the following page provide an example of the data entry.

WinGAP - Commercial Extra Features

Description	Comp #	Method	Table	Cost
BSMT (UNFIN)	X040	1	0	17.00
CANOPY	X010	1	0	14.00
DECK (WOOD)	X030	1	0	8.00
LOADING DOCK	X020	1	0	0.12
OVERHEAD DOORS	XOHD	1		10.00
PATIO	X060	1		4.00
PLUMBING FIX	X099	2	99	1.00
PORCH OPEN	X031	1	0	15.00
SPRINKLERS - 5000 sf	X200	1	0	2.38
SPRINKLERS - DRY	X201	1		3.00
UTILITY ROOM	X070	1		18.00

**Pricing Information**

Comp #   Description

Pricing Method  Table Code  Base Cost

WinGAP - Commercial Lump Sum Extra Features

Description	TableRef	Dim1	Dim2	Points	n
PLUMBING FIX	99	1	0	4.000000	

Table Reference: 99      Unit Dollars: 400.000000

Dimension 1: 1

Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

In the example above, each plumbing fixture adds a value of \$400.

All other extra features could be added in similar fashions as illustrated above.

## Commercial Improvement Exercises

1. Using the schedules in the Appendix for an Office building type, determine the area/perimeter factor for an improvement that has the dimensions of 125' x 180'.

2. Using the schedules in the Appendix for a General building type, determine the wall height factor for a 10 story improvement that has a height of 330 feet from the ground to the top of the building.



3. Using the schedules in the Appendix, what would the actual base cost of a Bank – Central Office be if the Commercial Base Cost was changed from 1.00 to 1.10.

4. Using the depreciation table below, what would the depreciation factor be for a 17 year old improvement with a life expectancy of 40 years.

<b>Age</b>	<b>LE 35</b>	<b>LE 40</b>	<b>LE 45</b>
15	.60	.68	.73
20	.49	.59	.66

5. Using the Schedules and Worksheets in the Appendix and Handouts, calculate the value of the following commercial improvement:

Item	Value
Use	Computer Center
Built As	Office
Life Expectancy	45
Construction Type	Type 5
Year Built	1983
Story Height	2.0
Ground Flr Area	10,000
Perimeter	410
Bldg Height	26
Heat	Cent Heat / AC – Good Quality
Floor Covering	Carpet – Good Quality
Plumbing	4 two fixture baths – Avg Rank
Extra Feature	Open porch – 400 sf – Avg Rank
Extra Feature	Overhead door (1) – 6 x 10 - Fair Rank
Grade	85
Other factors	All 1.00

6. Using the Schedules and Worksheets in the Appendix and Handouts, calculate the value of the following commercial improvement:

Item	Value
Use	Motel
Built As	Motel
Life Expectancy	35
Construction Type	Type 4
Year Built	1977
Story Height	3.0
Ground Flr Area	4,000
Perimeter	280
Bldg Height	30
Heat	Steam Radiators – Low Quality
Floor Covering	Carpet – Fair Quality
Plumbing	60 3-fixture baths – Avg Rank
Extra Feature	Canopy – 1000 sf – Avg Rank
Grade	60
Other factors excluding Dep	.70

7. Using the methodology and procedures discussed in the **Development of Commercial / Industrial Improvement Schedules** section, develop schedule costs and other associated items for a Computer Center (Section 14 Page 18, page 8 in the WinGAP Commercial Pricing Schedules handout):

- ❑ C – Average will be the base category
- ❑ The following should be deducted from the base value using Section 44 Page 4 (Pages 9-10 in the WinGAP Commercial Pricing Schedules handout)
  - a. Plumbing
  - b. Warm & cool air (zoned)
- ❑ Cost for warm & cool air (zoned) should be setup as a Heating item under Structural Elements
- ❑ Construction Class Modifiers should be calculated
- ❑ Current and Local Cost Multipliers are found on Pages 3-4 of the WinGAP Commercial Pricing Schedules Handout

Schedule Item	Value / Cost
Used As Code	
Description	
Pricing Code (Method)	
Base Cost	
Construction Cost Modifier 1	
Construction Cost Modifier 2	
Construction Cost Modifier 3	
Construction Cost Modifier 4	
Construction Cost Modifier 5	
Warm & cool air (zoned) Class 1	
Warm & cool air (zoned) Class 2	
Warm & cool air (zoned) Class 3	
Warm & cool air (zoned) Class 4	
Warm & cool air (zoned) Class 5	

8. Using the methodology and procedures discussed in the **Development of Commercial / Industrial Improvement Schedules** section, do the following example:

The Board of Assessors has decided to build the commercial schedule to include an entry for each construction type for a particular use. For example, instead of having a single entry of Office, there will be an entry in the schedules for Office – Construction Class A, Office - Construction Class B, Office - Construction Class C, etc. The average category will be used as the base value for each Construction Class.

- ❑ Develop schedule entries for Office - Class A
  - a. Office Pricing Information can be found on Pages 2-7 of the WinGAP Commercial Pricing Schedules handout
- ❑ The following should be deducted from the base value using Section 45 Page 2 & 4 on pages 5 and 7 of the WinGAP Commercial Pricing Schedules handout
  - a. Plumbing
  - b. Heating
  - c. Floor Covering
- ❑ Construction Class Modifiers should be calculated

Schedule Item	Value / Cost
Used As Code	
Description	
Pricing Code (Method)	
Base Cost	
Construction Cost Modifier 1	
Construction Cost Modifier 2	
Construction Cost Modifier 3	
Construction Cost Modifier 4	
Construction Cost Modifier 5	
Warm & cool air (zoned) Class 1	
Warm & cool air (zoned) Class 2	
Warm & cool air (zoned) Class 3	
Warm & cool air (zoned) Class 4	
Warm & cool air (zoned) Class 5	

# Manufactured Housing Schedules

WinGAP provides appraisers with the means to value the two different categories of manufactured housing, prebilled and non-prebilled, that have been created by Georgia Statutes and Regulations. Both categories of manufactured homes derive their values from the same set of valuation tables. Two approaches to value, cost and market, may be employed in the valuation process.

The cost approach in WinGAP begins with the appraiser entering and/or updating valuation tables that when applied to the manufactured homes characteristics will produce a replacement cost new. The replacement cost new is then depreciated based on the age and life expectancy of the home.

The market approach involves the use of the NADA Manufactured Housing Pricing Guide. Given a manufacturer, model, size and year built, WinGAP will locate the value of the manufactured home in the pricing guide. Updates to the pricing guide will be provided annually. It is a decision of the Board of Assessors as to whether the updated pricing guide is used or not used. The most current year version of the NADA Valuation Schedules is displayed at the bottom of the Preferences screen as shown on the next page.

**NOTE:** See the section entitled "Updating NADA Schedules" later in this manual for the procedures on how to update the NADA valuation schedules.

Values from both the cost and market approaches will be visible on the Manufactured Housing screen. The appraiser can then declare which approach produces the better value for the digest.

Schedule items for manufactured housing can be found in three areas within WinGAP: **Tools >> Preferences**, **Tools >> Schedules/Tables >> Manufactured Housing** and **Tools >> Depreciation >> Non-Prebilled Tables** and **Tools >> Depreciation >> Prebilled Tables**.

## Manufactured Housing Preferences

The Preferences menu item can be accessed by going to **Tools >> Preferences**. The schedule item for manufactured housing found on the Preferences screen, as shown on the following page, is the Mfg Housing Depreciation Year. The Mfg Housing Depreciation Year is used in the determination of the age of the manufactured home. The year built or effective year built, if entered, is subtracted from the Depreciation Year to generate the age. If a negative age is calculated, the value reverts to 1 year old. For example, if the year model of a home is 1985 and using the Depreciation Year shown on the screen on the next page, the age of the home to be used in the determination of depreciation would be 16 years (2001 – 1985). The true calendar year or appraisal year would have no bearing on the age of the home.

WinGAP - Preferences

**County Information**

County Name:  ☐ Exempt from Provisions of HB233 for this digest year

Address:

City / State / Zip:

Phone / Ext:   Email:

Fax:  Web:

**Point/Base Costs**

Residential	100.00
Commercial	100.00
Commercial Base	1.00
Accessory	100.00

**Depreciation Years**

Residential	2001
Commercial	2001
MFG Housing	2001
Accessory	2001

**Other Options**

<input type="checkbox"/> Truncate Values	<input checked="" type="checkbox"/> Auto-Reasons (Real)
<input checked="" type="checkbox"/> Disable Logins	<input checked="" type="checkbox"/> Auto-Reasons (Pers)
<input checked="" type="checkbox"/> hBrowser Cost Form	<input type="checkbox"/> PT50R = LIVE DATA
<input type="checkbox"/> Lock System	<input type="checkbox"/> COA Auto-Flag
<input type="checkbox"/> Rnd Area Mult to 6 dec.	<input type="checkbox"/> Hide Comments
<input type="checkbox"/> Attic: Use Max/Min Area	<input type="checkbox"/> Bsmt: Use Max/Min Area

Special District Description:

Parcel Number Template:

Customize Lendor Label:

Customize Occupancy Label:

Customize Fireplace Label:

Appraisal Year:

Rural Acre Break:

PU Eq Ratio %:

Return Deadline:

Default Startup Directory:

Guest Startup Directory:

*Freeport Information is now found in tax district schedule*

ABOS Default:

Land Influences:

ABOS Yr: 2010

NADA Yr: 2010

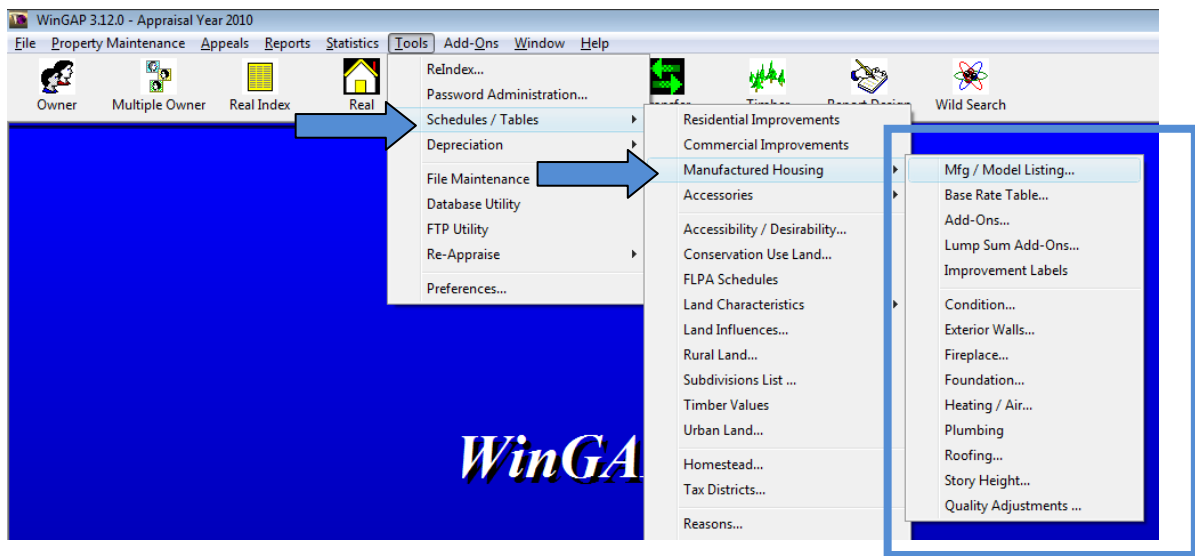
## Manufactured Housing Schedules/Tables menu

The third option on the **Tools >> Schedules / Tables** menu is **Manufactured Housing**. The Manufactured Housing option presents a sub-menu, shown on the next page, that is divided into two sections:

- ☐ **Size and Area** schedule items that assist with calculating the size and area of the Mobile Home; and
- ☐ **Supplemental** schedule items, most of which can be used to adjust the value of the Mobile Home, such as Condition and Exterior Walls.

Each of the schedule items will be discussed in the order they appear on the Manufactured Housing Menu.





## Size and Area schedule items

### Mfg / Model

The **Mfg/Model Table**, shown below, contains a schedule of most types of Mobile Homes sold or found in the United States. The listing can be customized to the County's needs by adding, changing, or deleting entries as discussed on the next page.

WinGAP - Mobile Home Mfg/Model Table

Manufacturer	Model
21st Century Homes	Limited
2513711216	Trendsetter
273551d2620	
5th Avenue Del	
Aberdeen	
Academy	
Addition	
Adrian	
Airline	
All Amer Heritage	
All American	
All American Of Ashburn	
Allen Homes	
Allenhomes	
Allstar	
Altair	
Am Eagle	
America General	
American	
American C	
American Coach	
American Eagle	
American Heritage	
American Home	
Anchor	
Anchor Ind	
Apollo	
Apollo Xxi	
Ara Ser	
Mobile	

GroupBox

Manufacturer: 21ST CENTURY HOMES      Class: Very Good

Model: LIMITED      Life: 25

Help   Cancel   New   Delete   Apply   OK

The Mfg/Model Listing Form is divided into three sections. The names of the Manufacturers of Mobile Homes are displayed in the list box on the left of the Form. The user can quickly select a Manufacturer by first clicking in the list box, and then keying the first letter of the name of the Manufacturer, such as "F" as in Fleetwood. Additional letters contained in the manufacturers name can be keyed to facilitate the search. For example, the letters "fleetw" could have been typed to locate the user closer to the desired manufacturer. If necessary, the arrow keys or Page Up or Page Down can then be used to move directly to the desired Manufacturer.

Once the Manufacturer is located, the user should click on the name, and the Models of Mobile Homes made by that Manufacturer will appear in the list box on the right side of the Form. Clicking on a Model Name, as seen below, will then display the Manufacturer name and Model name in the bottom section of the Form, along with the Class, which is the Quality of Construction of the Mobile Home, and the Life, which is the Life Expectancy for that Mobile Home. Any of these items can be changed, If desired, by clicking on the appropriate field and changing the data. **IMPORTANT:** In order for the data on the Mobile Home to display in the fields on the bottom of the Form, the user MUST click on the Manufacturer name in the left list box and then the desired Model name in the right list box.

WinGAP - Mobile Home Mfg/Model Table

Manufacturer	Model
Empress	"C" Series
Encore	#9281
English Squire	1662b
Escort	2462a
Estchester	2663bs
Faimont Hms	2663m
Faimont Homes	2762b
Faimore	4643d
Fairview	6662a
Fairway	6763a
Family House	6763p
Farmore	Auburn
Fernwood	Barrington Signal
Fiesta	Bridgewood
Fifth Avenue	Brittany Park
First Am	Broadmore
First Lady	Carnegie Hill Classic
Fisher Corp	Catalina
Fitzgerald	Chadwick
Flair	Chadwick Elite
Flamingo	Chapel Hill
Fleetwood	Cottonwood
Fleetwood	Dream Park
Flintstone	Eagle Trace
Flintstone	Eagle Trace S
Franklin	Eagle Trace Sle
Franklin Homes	Eagletrace
Freedom	Edgewood
Frontier	Farmington Hill
Fulton	Farmington Hill

GroupBox

Manufacturer	FLEETWOOD	Class	Average
Model	BRITTANY PARK	Life	25

Help Cancel New Delete Apply OK

A NEW Mobile Home can be added to the Mfg/Model Listing by

- ❑ Clicking the New Button,
- ❑ Keying the information in the Manufacturer and Model Fields
- ❑ Clicking on the Class and Life combo boxes to select the appropriate Class and Life
- ❑ Clicking the Apply or OK Button to save

The assignment of the Class and Life should be based on the quality of the manufactured home. The appraiser can choose between six Class selections:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Average
- ☐ Fair
- ☐ Low Cost

Life expectancy selections range from 15 to 40 in increments of 5 years. The lower the life expectancy the faster the home depreciates. The Life selection should correspond to the class in the following manner:

Class	Life
Excellent	40
Very Good	35
Good	30
Average	25
Fair	20
Low Cost	15

A Mobile Home can be deleted from the Mfg/Model Listing by first selecting the Manufacturer and Model as described above, and then clicking the Delete Button. WinGAP will check to see if this Manufacturer and Model of Mobile Home is used in the PreBill or Residential Improvement Mobile Home database. If this particular Model is not used, it will be deleted from the schedule; if this Manufacturer and Model is in use, it will not be deleted and the user will receive the message that the "MFG & MODEL are used in your improvement file - delete failed".

### Base Rate

The **Base Rate Table**, below, contains dollar per square foot values for the listed length and width combinations based upon the Quality Class of the Mobile Home. The table can be customized to the County's needs by changing entries as discussed on the following page.

WinGAP - Mobile Home Base Rate Table

Quality Class: Average

WIDTH	Single Wide			Multi Wide				
	12	14	16	24	26	28	32	36
40	28.03	25.89	24.23	28.41	22.29	25.78	25.78	19.88
44	27.55	25.41	23.75	27.31	22.29	24.91	24.91	19.88
48	27.08	24.94	23.28	26.44	22.29	24.04	24.04	19.88
52	26.60	24.46	22.80	25.78	22.29	23.16	23.16	19.88
56	26.36	24.23	22.33	25.13	22.29	22.51	22.51	19.88
60	25.89	23.75	22.09	24.47	22.29	21.85	21.85	19.88
64	25.65	23.51	21.61	23.82	22.29	21.19	21.19	19.88
68	25.18	23.04	21.38	23.38	22.29	20.76	20.76	19.88
72	24.94	22.80	21.14	22.72	22.29	20.32	20.32	19.88
76	24.70	22.56	20.90	22.29	22.29	19.88	19.88	19.88
80	24.70	22.56	20.90	22.29	22.29	19.88	19.88	19.88

Buttons: Help, Cancel, Apply, OK

The following steps should be taken to modify values in this table:

- ❑ The appropriate Quality Class of the Mobile Home should be selected on the Size Adjustment Table Form by clicking on the Quality Class combo box. The default is Average.
- ❑ The dollar per square foot values can then be changed by clicking in the field corresponding to the Length and Width of the Single Wide or Multi Wide Mobile Home.
- ❑ When data entry is complete, the Apply or OK button can be clicked to save the change.

**Note: To save the changes for a Quality Class, the Apply button must be clicked before selecting another Quality Class.**

## Addons

The **Addons** schedule, below, is used to price external additions, such as decks and porches, to the Mobile Home. The listing can be customized to the County's needs by adding, changing, or deleting entries as discussed below and on the following pages.

**Note:** The Addons schedule should be built prior to building the Lump Sum Addons schedule, discussed next.

Description	Comp #	Method	Table	Cost
Addition to Mh	0009	1		10.00
ADDITION-AVERAGE	0006	1		0.00
Carport	0012	1		15.00
Deck-1	0005	1		12.00
Deck-2	0006	1		8.00
Deck-3	0007	1		4.00
Detached Garage	0013	1		10.00
Enclosed Porch	0002	1		15.00
Fireplace - PreFab	0003	2	01	0.00
Lean To	0014	1		6.00
Metal Utility	0010	1		8.00
MH ADDS	ADDS	1		0.00

**Pricing Information**

Comp #   Description

Pricing Method  Base Cost

The Addons Form is divided into two sections. Existing Addon items are displayed in the list box on the top of the Form. The following information, from left to right, is displayed in the list box

- ❑ the Description of the item
- ❑ the Comp # (Component Number)
- ❑ the Method (Calculation Method)
- ❑ the Table Number (used for Lump Sum items only)
- ❑ the Cost (the Base Cost)

Clicking on an item in the list box will display the calculation data about the item in the bottom section of the Form. An explanation of each of these data entry fields follows.

- **Comp #:** A County-assigned **unique** four-character identifying code for each type of Mobile Home Add-On. The code can be any combination of four letters or numbers. An **Edit** button is located to the right of the Comp # field. The button is placed there to prevent inadvertent changes to the component number. If a component number is to be added or modified, the user must first click the Edit button.
- **Description:** A Description of the Mobile Home Add-On, normally the name such as Patio, Deck, Open Porch, etc.
- **Pricing Method:** There are three available Pricing Methods:
  - ☐ Lump Sum,
  - ☐ Non-Value Item,
  - ☐ Square Foot

Most Add-Ons are priced by the square foot. If the Lump Sum method is used, normally with items such as Fireplaces, there will always be an entry in the Table Code field to link this Add-On item to a record in the Lump Sum Add-Ons Table. An entry in the Lumps Sum Add-Ons Table is required to properly price the item by the Lump Sum method. Lump Sum items will not have an entry in the Base Cost field. The Non-Value method is used for Add-Ons that are descriptive in nature and have no value; these items will not have entries in either the Table Code or Base Cost fields. Add-Ons priced using the Square Foot method will always have an entry in the Base Cost field, but no entry in the Table Code field.

- **Table Code:** If Lump Sum is the Pricing Method for the Add-On, there will always be an entry in this field. If the Table Code is less than nine (9), a space should be placed in front of the number. This Table number will also be found in the Lump Sum Add-Ons Table with an associated value to price this particular Add-On by that Lump Sum amount. The user can click on the Table Code description next to the field to change the description to a Button and directly access the Lump Sum Add-Ons Table and add or edit the Table item associated with this Add-On if necessary.
- **Base Cost:** If the Addon is priced by the Square Foot, such as a porch or patio, the Base Cost is the dollars per square foot value for this particular type of Addon.

A NEW Addon item can be added to the schedule by:

- ☐ clicking the New Button at the bottom of the Form
- ☐ clicking the Edit Button to gain access to the Comp # field. The Component # code is County-defined and is entered first
- ☐ keying the Description for the new item into the Description field,
- ☐ clicking on the combo box for the Pricing Method to select the appropriate Pricing Method,
- ☐ keying values into the Table Code and Base Cost fields, depending upon the pricing method,
- ☐ clicking the Apply or OK Button.

An Add-On item can be edited by

- ☐ clicking on the item in the list box,
- ☐ changing the information in the desired field(s),
- ☐ clicking the Apply or OK Buttons.

An Addon item can be deleted from the schedule by clicking on the item in the list box and clicking the Delete Button, which will delete the Addon item from the schedule.

## Lump Sum Addons

The Lump Sum Addons schedule is used to price external additions, such as decks and porches, to the Mobile Home that are priced by the Lump Sum or item method. A Lump Sum item in the Addons schedule will have a Table Code that will look up an entry in the Lump Sum Addons schedule and price the item accordingly.

**NOTE:** The Lump Sum Addons schedule should be built prior to adding any Manufactured Housing Addon items that are priced using this method. The Manufactured Housing Addons schedule, above, should be built prior to building the Lump Sum Addons schedule.

Below and on the next page are two examples of Lump Sum Addons tables. The construction of this table, as well as all other tables, is at the discretion of the appraiser.

WinGAP - Manufactured Housing Lump Sum Add-Ons

Description	TableRef	Dim1	Dim2	Points
Fireplace - PreFab	01	0	0	1500.000000
Not currently assigned	a	0	0	2.000000

Table Reference: 01      Unit Dollars: 1500.000000  
Dimension 1: 0  
Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

WinGAP - Manufactured Housing Lump Sum Add-Ons

Description	TableRef	Dim1	Dim2	Points
Central Air (4-Ton 1944.00)	11	0	0	1944.000000
Central Air (800)	02	0	0	800.000000
Central Air(3-Ton 1665.00)	01	1	0	1665.000000
Fireplace (800)	04	0	0	800.000000
Fireplace - PreFab	10	0	0	1600.000000
Fireplace(1200)	03	0	0	1200.000000
M/H Roof(2500)	05	0	0	2500.000000
Roof-Over(1000)	06	0	0	1000.000000
Septic Tank(500)	09	0	0	500.000000
Well (1500)	08	0	0	1500.000000
Well/Septic Tank(2000)	07	0	0	2000.000000

Table Reference: 11      Unit Dollars: 1944.000000

Dimension 1: 0      Dimension 2: 0

Buttons: Help, Cancel, New, Delete, Apply, OK

The Lump Sum Addons Schedule Form displays the existing schedule items in the list box on the left side of the form. The column headings refer to the DESCRIPTION of the Lump Sum item, the TABLEREF code number, the DIM1 and DIM2 pointers, and the POINTS assigned to this type of Addon. The schedule is indexed in Description order. The calculation data for each item in the list box can be displayed in the fields on the right side of the form by clicking on an item. An explanation of each of the fields on the schedule form follows.

- **Table Reference:** The Table Reference code is a **unique** County-defined number. Letters or numbers can be used, such as 1-99, AA-ZZ, or 1A, 2C. If a numeric Table Reference is less than ten(10), it should be entered as 01(a zero followed by a 1), 02, 03, etc. When adding an item to the Lump Sum Add-Ons schedule, this Table Reference must already exist in the Manufactured Housing Add-Ons schedule. WinGAP will assign the Description of the item in the Add-Ons schedule with this Table Reference to the Description of the Lump Sum Add-Ons item. This is why there is no Description data entry field on the Lump Sum Add-Ons form. If the Table Reference of the Lump Sum Add-On does not exist in the Add-Ons schedule, the Description of the Lump Sum Add-On will say "Not currently assigned".
- **Dimension 1:** Dimension 1 is used as a pointer in the table for locating the proper value. It can represent various characteristics of an Add-On such as Fireplace size, Septic Tank capacity, Central Air BTU capacity, grade code, or code for type. The user is responsible for maintaining the definitions of these characteristics. The value must be numeric, and 0 is acceptable.
- **Dimension 2:** The Dimension 2 value is used to further define the valuation of the Lump Sum Add-On item and is used in conjunction with Dimension 1 to locate the proper value. The value must be numeric and 0 is acceptable.
- **Unit Dollars:** The actual dollar cost of the Lump Sum Add-On item.

A new item can be added to the Lump Sum Addons Schedule by

- ❑ Clicking the New Button at the bottom of the Form
- ❑ The Table Reference # code is County-defined and is entered first
- ❑ The values for the Dimension 1, Dimension 2, and Unit Dollars are keyed
- ❑ The Apply or OK Buttons can be clicked to save the item to the schedule.

An item can be deleted from the schedule by first selecting the item in the list box and then clicking the Delete Button at the bottom of the Form. The user should be certain that this Lump Sum Addons Schedule item is not used by any Addons prior to clicking the Delete Button.

The complete Lump Sum Addons Schedule can be printed by using either the Report Designer or FoxPro.

## Improvement Labels

**NOTE: Until notification of a change, Improvement Labels for Manufactured Homes are descriptive only, and do not contribute to value or area.**

Improvement Labels identify sketched and manually entered areas of a Manufactured Home and assist in the pricing of the Improvement. They are used in calculating the square footage (heated area) of the Improvement. The schedule can be customized to the County's needs by adding, changing, or deleting entries as discussed below.

LABEL	DESCRIP	SQFT	COSTFACT	AREAFACT	LABELTYPE	BLDGTYPE	VALMETHOD	TAB
1.0s	1.0 Story	0.000000	1.0000	1.0000	Primary	Mobile	0	
DK	Deck	10.000000	1.0000	1.0000	Addition	Mobile	0	
OP	Open Porch	16.000000	1.0000	1.0000	Addition	Mobile	0	

Label: 1.0s

Description:

Label Type: Primary

Cost / SQFT: 0.0000

Cost Factor: 1.0000

Area Factor: 1.0000

Buttons: Help, Cancel, New, Delete, Apply, OK

The Improvement Labels Form, as seen in the example above, is comprised of a list box, where the existing Improvement Labels are displayed, with the data entry fields for each Improvement Label item below the list box. The following information, from left to right, is displayed in the list box about each Improvement Label item: the Improvement Label, Improvement Label Description, Cost/SqFt, Cost Factor, Area Factor, Label Type, and Building Type. Improvement Label schedule items are listed in Improvement Label order. The user can press the Home, End, Page Up, Page Down, or arrow keys to move up and down in the list box and locate an Improvement Label, or the user can click with the mouse on the vertical scroll bar and drag it up or down to find the item. The horizontal scroll bar or left and right arrow keys will move the user across the list box to view all of the information about each item. Clicking on an Improvement Label item in the list box will display the data about that item in the data entry fields at the bottom of the Form. A discussion of each of these fields follows.

- **Label:** A four character field (letters, number or symbols are acceptable) where the County-defined Improvement Label is keyed. An Improvement Label must be unique, cannot be duplicated, and should quickly identify the Improvement. For example, a Primary Improvement Label **1ST** could be used to identify a One Story Manufactured Home, and the Appendage



Improvement Label **OP** could be used to identify an Open Porch. The Improvement Label is displayed on the sketch screen and printed on the Property Record Card for each part of an Improvement that is sketched.

- **Description:** The Description or identifying name, such as **Deck**, of the Improvement Label is keyed into this 20 character wide field.
- **Label Type:** The type of Improvement Label is selected by clicking on the Label Type combo box. There are five available types: Addition, Appendage, Interior, Primary, and Upper.
  - ☐ The **Addition Label** is used for an Addition (heated area) to a Manufactured Home. Improvement. Areas that are labeled as Additions will display as a double black dashed line on the sketch screen.
  - ☐ The **Appendage Label** is used for appendages (non-heated area) to a Manufactured Home, such as canopies and loading docks. Areas that are labeled as Appendages will display as a solid blue line on the sketch screen.
  - ☐ The **Interior Label** is used for "interior" parts of a Manufactured Home, such as a Second Story, that the appraiser wishes to price differently and label separately from the primary heated area of the Improvement. Interior Label areas will display as a green dashed line on the sketch screen.
  - ☐ The **Primary Label** is used for the primary heated area of the Manufactured Home, such as One Story, Two Story, etc. Areas that are labeled as Primary will display as a red solid line on the sketch screen.
  - ☐ The **Upper Label** functions in a similar manner as the Primary Label type. The exception being the fact that the area factor adjustment will be applied to the area of the polygon and the resulting square footage will be used in the determination of the area. Upper Level areas will display as a broken blue violet line on the sketch screen.

**IMPORTANT:** A Label Type **MUST** be selected for every Improvement Label.

- **Cost / SQFT:** The Cost / SQFT field contains the cost per square foot for Addition and Appendage label types.
- **Cost Factor:** The Cost Factor is used to adjust the value of a Manufactured Home and is used with the Interior and Primary types of Improvement Labels. The default WinGAP Cost Factor is 1.00 for a First Story Label, 1.80 for a Two Story Label, and 0.9 for a Second Story (Interior) Label. These Cost Factors can be changed if desired by the appraiser to adjust and localize the pricing of Manufactured Homes. **NOTE:** The Cost Factor field will default to 1.00.
- **Area Factor:** The Area Factor is used to adjust the Heated Area of Manufactured Homes and, like the Cost Factor, is used with the Interior and Primary types of Improvement Labels. The default WinGAP Area Factor default is 1.00 for a First Story Label, 2.00 for a Two Story Label, and 1.00 for a Second Story (Interior) Label. These Area Factors can also be changed if desired by the appraiser to adjust and localize the calculating of the Heated Area of Manufactured Homes. **NOTE:** The Area Factor field is not used with Appendage and Addition Label types, and will default to 1.00..

A NEW Improvement Label can be added to the Improvement Labels schedule by:

- ☐ clicking the New button
- ☐ clicking in the Label field (make sure the cursor is at the far left of the field) and keying the new Improvement Label
- ☐ using the Tab key to go to the rest of the data entry fields where the new information can be keyed
- ☐ the Apply or OK Button should be clicked to save the data

Existing Improvement Labels can be **edited** by clicking on the desired item in the list box and pressing the Tab key. This will take the user to the Label field, where the Label can be changed,

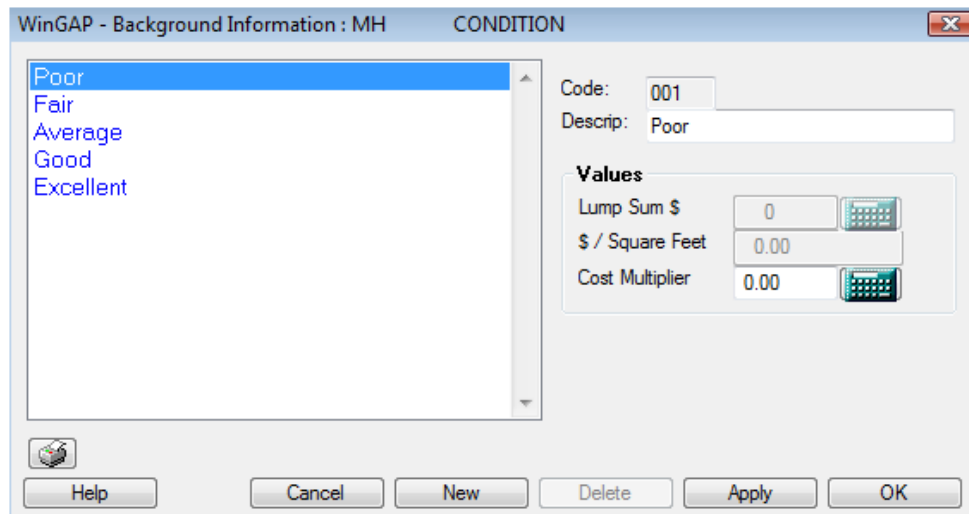
or the user can again press the Tab key to move on to the other data entry fields where this data can be edited. The data is saved by clicking the Apply or OK Button.

An Improvement Label cannot be **deleted** from the schedule by the user. If the County wishes to delete a Manufactured Housing Improvement Label, it can be handled by any WinGAP Agent during an Online Support Session.

## Supplemental schedule items

### Condition

The **Condition** schedule, below, is a listing of available Observed Condition types. Condition types are used in adjusting depreciation for the Mobile Home. Each Condition type is assigned a multiplier or factor, that is used to adjust the depreciation. The appraiser in each county must decide what Condition type will be considered as the base.



The image shows a software dialog box titled "WinGAP - Background Information : MH CONDITION". It features a list box on the left containing the following items: "Poor", "Fair", "Average", "Good", and "Excellent". The "Poor" item is currently selected. To the right of the list box, there are input fields for "Code:" (containing "001") and "Descrip:" (containing "Poor"). Below these is a section titled "Values" which contains three rows of input fields: "Lump Sum \$" with a value of "0", "\$ / Square Feet" with a value of "0.00", and "Cost Multiplier" with a value of "0.00". Each of these three rows has a small calculator icon to its right. At the bottom of the dialog box, there is a row of buttons: "Help", "Cancel", "New", "Delete", "Apply", and "OK".

A **New** Condition type can be added by

- ☐ Clicking the "New" button
- ☐ Keying in the **Description** and the **Cost Multiplier** in their respective fields
- ☐ Clicking "Apply" or "OK".

There is a limit of ninety-nine (99) Condition types that can be added to the schedule.

An **existing** Condition type can be edited by clicking on the desired item and editing the appropriate field(s). At the present time, it is not possible to **delete** a Condition type.

### Exterior Walls

The **Exterior Walls** schedule, next page, provides a listing of the current Exterior Wall types. Exterior Walls are used in pricing the Mobile Home. Each Exterior Wall type maybe assigned a \$ / Square Foot amount that will be used to adjust the value of the Mobile Home.

WinGAP - Background Information : MH EXTERIOR WALLS

Aluminum  
Brick  
Cedar Siding  
FiberGlass  
Vinyl  
Pressed Wood  
Sheet Metal  
Unknown

Code: 001  
Descrip: Aluminum

**Values**

Lump Sum \$ 0  
\$ / Square Feet 0.00  
Cost Multiplier 0.00

Help Cancel New Delete Apply OK

A **New** Exterior Wall type can be added by

- ❑ Clicking the "New" button
- ❑ Keying in the **Description** and the **\$ / Sq Ft** value in their respective fields
- ❑ Clicking "Apply" or "OK".

There is no limit to the number of Exterior Wall types that can be added to the schedule.

An **existing** Exterior Wall type can be edited by clicking on the desired item and editing the appropriate field(s). At the present time, it is not possible to delete an Exterior Wall type. Exterior Wall multipliers should not be changed in a County without performing significant market studies to determine whether the factor should be increased or decreased.

## Fireplace

The **Fireplace** schedule, below, provides a listing of the current Fireplace types as well as other miscellaneous Mobile Home items, such as Spas and Hot Tubs, that the appraiser wishes to value using the Lump Sum method. The value in the **Lump Sum \$** field is the value of that type of Fireplace or miscellaneous item. For example, if a Pre-fab, 1 sty 1 Box Fireplace is to be priced at \$900, the Lump Sum \$ value is \$900.

WinGAP - Background Information : MH Miscellaneous Items (Fireplace)

Pre-fab 1 sty 1 Box  
Pre-fab 2 sty 1 Box  
Const 1 sty 1 Box  
Const 2 sty 1 Box  
Const 1 sty 2 Box  
Const 2 sty 2 Box  
Const 2 sty 4 Box  
Fireplace N. V.

Code: 001  
Descrip: Pre-fab 1 sty 1 Box

**Values**

Lump Sum \$ 900  
\$ / Square Feet 0.00  
Cost Multiplier 0.00

Help Cancel New Delete Apply OK

A **New** Fireplace/Lump Sum Valuation item type can be added by

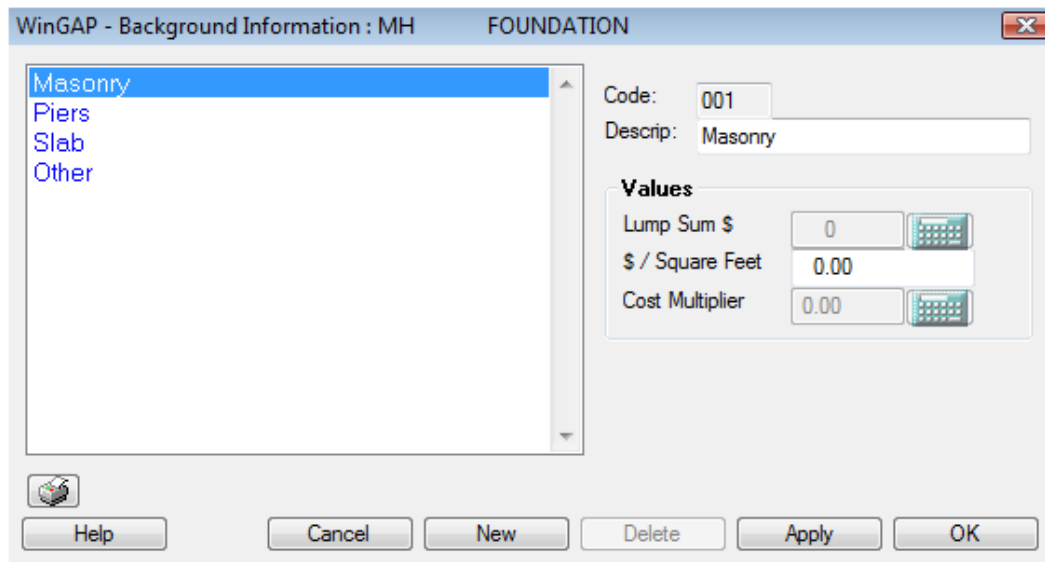
- ❑ Clicking the "New" button
- ❑ Keying in the **Description** and the **Lump Sum \$** in their respective fields
- ❑ Clicking "Apply" or "OK"

There is no limit to the number of Fireplace types that can be added to the schedule.

An **existing** Fireplace type can be edited by clicking on the desired item and editing the appropriate field(s). At the present time, it is not possible to delete a Fireplace type. Fireplace Lump Sum values should not be changed in a County without performing significant market studies to determine whether the value should be increased or decreased.

## Foundation

The Foundation schedule, below, provides a listing of the current Foundation types. If the appraiser desires, foundation types can contribute value to mobile homes by keying an amount in the \$ / Square Feet field.

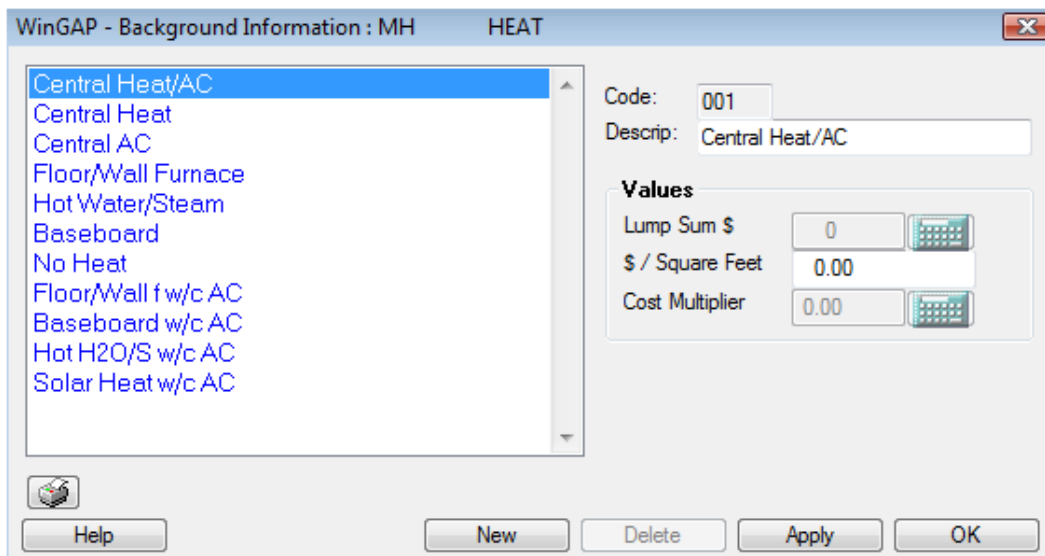


A **new** Foundation type can be added by clicking the "New" button, keying in the type in the **Description** field, and then clicking "Apply" or "OK". There is no limit to the number of Foundation types that can be added to the schedule.

An **existing** Foundation type can be edited by clicking on the desired type and editing the Description field. At the present time, it is not possible to delete a Foundation type.

## Heating/Air

Heating/Air Conditioning types and their \$ / square foot adjustments are stored in the **Heating/Air** Schedule, as seen on the next page. These dollar amounts are used to adjust the Mobile Home value based on the heating/air conditioning type found in the Mobile Home.



WinGAP - Background Information : MH HEAT

Central Heat/AC  
 Central Heat  
 Central AC  
 Floor/Wall Furnace  
 Hot Water/Steam  
 Baseboard  
 No Heat  
 Floor/Wall f w/c AC  
 Baseboard w/c AC  
 Hot H2O/S w/c AC  
 Solar Heat w/c AC

Code: 001  
 Descrip: Central Heat/AC

**Values**  
 Lump Sum \$ 0  
 \$ / Square Feet 0.00  
 Cost Multiplier 0.00

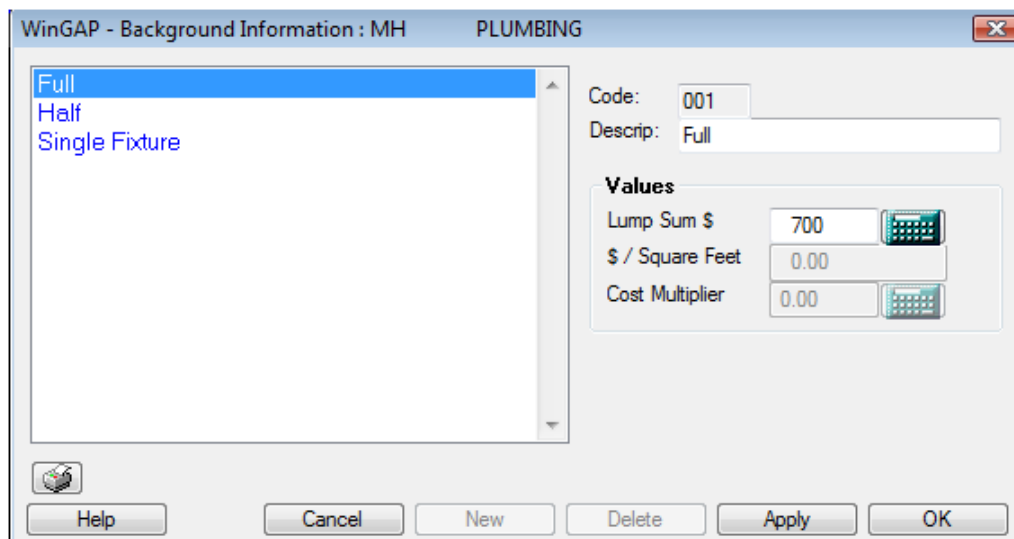
Help New Delete Apply OK

A **new** Heating type can be added by clicking the "New" button, keying in the **Description** and the **\$ / Square Feet** value in their respective fields, and then clicking "Apply" or "OK". There is no limit to the number of Heating types that can be added to the schedule.

An **existing** Heating type can be edited by clicking on the desired type and editing the appropriate field(s). At the present time, it is not possible to **delete** a Heating type.

## Plumbing

The **Plumbing** schedule, as seen below, provides a listing of the current Bathroom types that the appraiser wishes to value using the Lump Sum method. Additional Plumbing Single Fixtures can also be priced using this method. The value in the **Lump Sum \$** field is the value for that type of Bathroom or Single Fixture. For example, if a Full Bath is to be priced at \$700, the Lump Sum \$ value is \$700.



WinGAP - Background Information : MH PLUMBING

Full  
 Half  
 Single Fixture

Code: 001  
 Descrip: Full

**Values**  
 Lump Sum \$ 700  
 \$ / Square Feet 0.00  
 Cost Multiplier 0.00

Help Cancel New Delete Apply OK

Since the Mobile Homes Form in WinGAP allows data entry in only the Full, Half, and Single Fixtures fields as far as Plumbing value is concerned, there is no need to add **New** Plumbing types to the Plumbing schedule, even though the schedule allows it. The value in the **Lump Sum \$** field for the three Plumbing types, Full, Half, and Single Fixture can be edited, however, by clicking in this field on the Plumbing Form. It is recommended, however, that the Full, Half, and

Single Fixture Descriptions not be changed; nor should any of the Plumbing types be deleted. Plumbing Lump Sum values should not be changed in a County without performing significant market studies to determine whether the value should be increased or decreased.

## Roofing

The **Roofing** schedule, below, provides a listing of the current Roofing types for Mobile Homes. If the appraiser desires, roofing types can be used to adjust mobile home values by entering the dollar adjustment in the \$/ Square Feet field.

A **new** Roofing type can be added by clicking the "New" button, keying in the type in the **Description** field, entering the amount of adjustment in the \$ / Square Feet field and then clicking "Apply" or "OK". There is no limit to the number of Roofing types that can be added to the schedule.

WinGAP - Background Information : MH ROOFING

Asphalt Shingle  
Wood Shingle  
Asbestos Shingle  
Slate  
Tile  
Metal  
Roll Roof  
Tar & Gravel  
Other

Code: 001  
Descrip: Asphalt Shingle

**Values**

Lump Sum \$	0	
\$ / Square Feet	0.00	
Cost Multiplier	0.00	

Help Cancel New Delete Apply OK

An **existing** Roofing type can be edited by clicking on the desired type and editing the Description field. At the present time, it is not possible to **delete** a Roofing type.

## Story Height

The **Story Height** schedule, next page, provides a listing of the current Story Height types for Manufactured Housing. Story Height types are descriptive only, and add no value to the Mobile Home.

WinGAP - Background Information : RES IMP STORY HEIGHT

1.0 Story  
1.5 Story  
2.0 Story

Code: 001  
Descrip: 1.0 Story

**Values**

Lump Sum \$ 0  
\$ / Square Feet 0.00  
Cost Multiplier 0.00

Cancel New Delete Apply OK

A **new** Story Height type can be added by clicking the "New" button, keying in the type in the **Description** field, and then clicking "Apply" or "OK". There is no limit to the number of Story Height types that can be added to the schedule. For the time being, however, only the 1, 1.5, and 2.0 Story Heights can be used on the Mobile Homes Form when adding or editing a Non-Prebilled or Prebilled Mobile Home.

An **existing** Story Height type can be edited by clicking on the desired type and editing the Description field. At the present time, it is not possible to **delete** a Story Height type.

### Quality Class

The **Quality Class** schedule, shown below, is a listing of the available Quality types. The quality types mirror the six manufactured housing classes. No Quality Classes should be added and none should be deleted. The purpose of the Quality Adjustments is to effect the \$ / Square Feet characteristic adjustments. For example, if a manufactured home is classed as Excellent and the Heating / Air item Central Heat / Air adds \$5.00 per square foot to the base cost of the home, the multiplier associated with the Quality Adjustment Excellent (1.75) would be applied to the \$5.00 ( $5.00 * 1.75$ ). It is not required that Quality Adjustments have any effect on value. This can be accomplished by setting all cost multipliers to 1.00.

WinGAP - Background Information : MH QUAL CLASS

Average  
Excellent  
Fair  
Good  
Low Cost  
Very Good

Code: AV  
Descrip: Average

**Values**

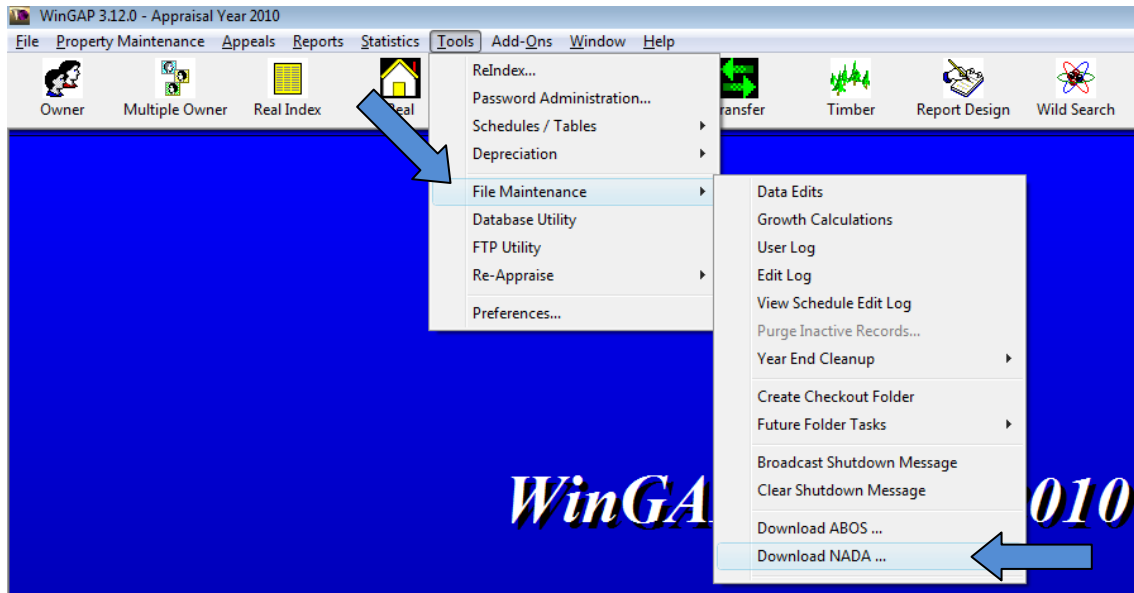
Lump Sum \$ 0  
\$ / Square Feet 0.00  
Cost Multiplier 1.00

Help Cancel New Delete Apply OK

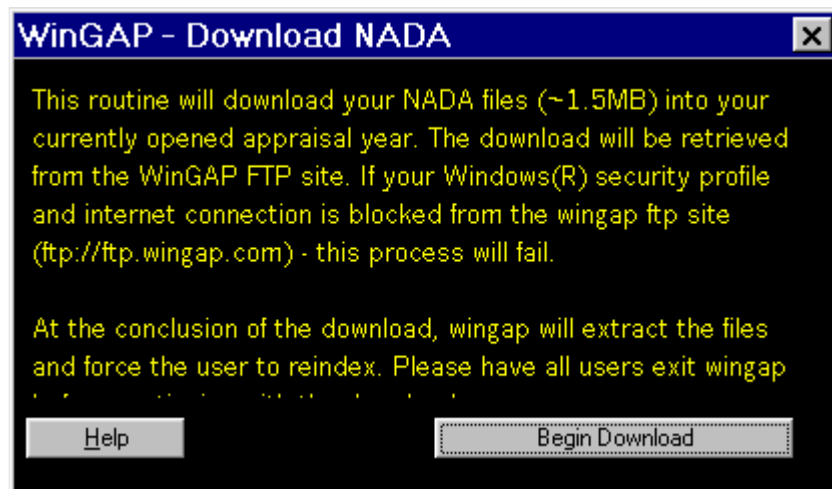
An **existing** Quality Adjustment type can be edited by clicking on the desired item and editing the Cost Multiplier field.

## Updating NADA Valuation Schedules

The NADA Valuation Schedules can be updated by running the last option on the **Tools >> File Maintenance** menu, as seen below.



This option allows the County to download the latest update to the NADA manufactured housing valuation files. Clicking on the **Download NADA** option produces the following message:



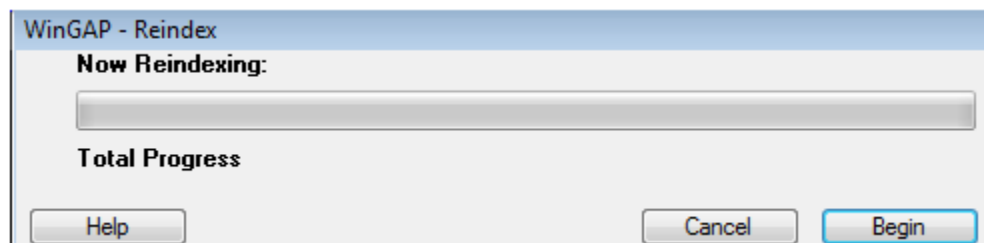
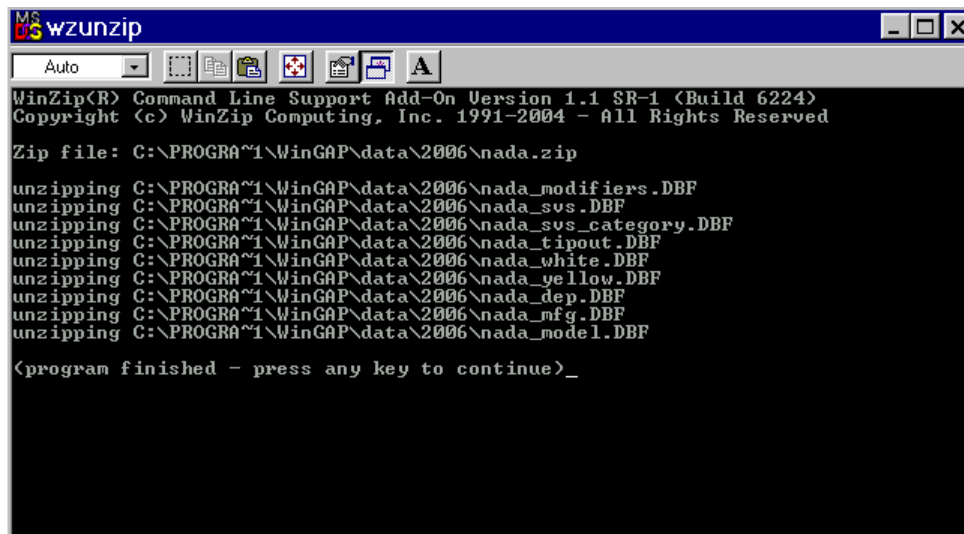
As the message indicates, the computer this procedure is performed on must have a working Internet connection that will allow the computer to connect to the FTP site, all other users must be out of WinGAP, and the NADA files will be downloaded into the current Appraisal Year folder. Also, this computer must have WinZip and the WinZip Command Line module installed in the C:\Program Files\WinZip folder.

On a broadband connection the download will only take a few seconds; on a dial-up connection it could take several minutes. If for some reason, such as a bad Internet Connection, the FTP site is down for maintenance, or there are local network FTP site blocking restrictions, the connection to the FTP site will not be made, and the user will receive a message similar to the one shown on the next page.



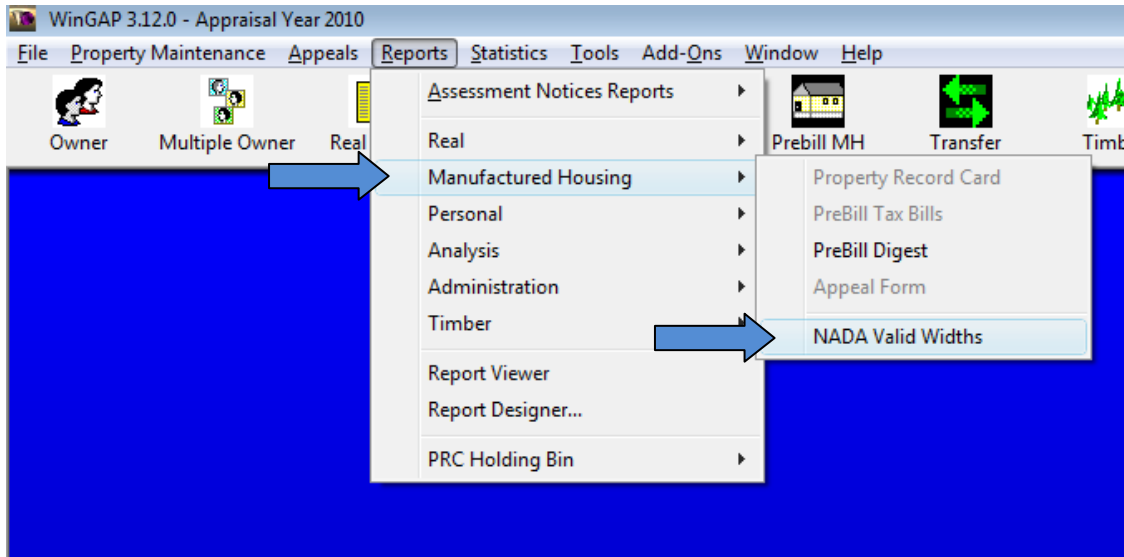


Otherwise, the connection to the FTP site will be established, and the user will see several messages, such as "Connecting to FTP site", "Logging On", "Finding NADA.Zip", and "Downloading". At the conclusion of the download, the user will receive the messages "File Downloaded", "Disconnecting" and "Done!". A Command Line window will appear and the NADA files will be automatically unzipped. At the conclusion of the unzipping process, the user can press any key to produce the Reindex message form. Images of both the Command Line window and Reindex form can be seen below. (**NOTE:** If the unzipping process is not successful, the user will not see these messages in the Command Window. If these messages do not appear, the user should contact a DOR Technical Support agent or use WinGAP's Online Support for assistance.)



Begin can be clicked to Reindex all files and the new NADA manufactured housing valuation files will be ready for use with WinGAP.

## NADA Valid Widths



A report showing NADA Valid Widths for Manufactured Housing can be printed by clicking on the final option on the **Reports >> Manufactured Housing** sub-menu. This will produce the NADA Valid Width report, as shown below.

Preview -

Page 1

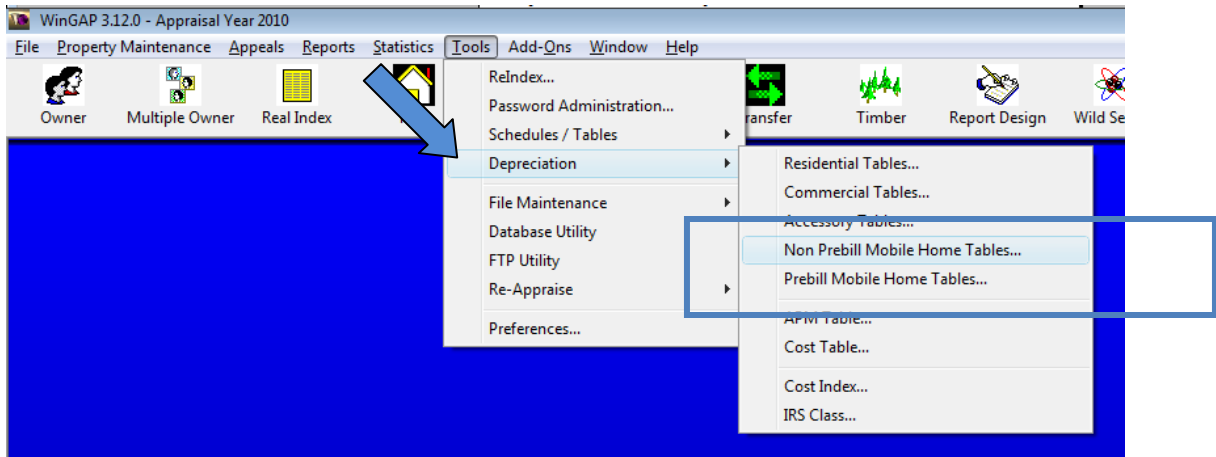
09/20/2010 NADA Valid Widths 1

Mfg	Mfg Id	Model	Model Id	Width
"M" SYSTEMS INC	4016	ALL MODELS for a Manufacturer	26910	0
21ST CENTURY HOMES	5499	LIMITED (q/mult)	26805	0
21ST CENTURY HOMES	5499	TRENDSETTER (q/mult)	26707	0
A B C COACH COMPANY	4018	ALL MODELS for a Manufacturer	26910	0
AAA MOBILE HOME MFG	5500	ALPHA (q/mult)	24619	0
AAA MOBILE HOME MFG	5500	ANDERSON (q/mult)	24650	0
AAA MOBILE HOME MFG	5500	PARAMOUNT (q/mult)	26117	0
AABCO INC	4020	ALL MODELS for a Manufacturer	26910	0
AARON HOMES INC	4021	ALL MODELS for a Manufacturer	26910	0
ABERCROMBIE BUILDERS INC	4022	ALL MODELS for a Manufacturer	26910	0
ACTION ENTERPRISES INC	4026	ALL MODELS for a Manufacturer	26910	0
ADDISON IND	4030	ALL MODELS for a Manufacturer	26910	0
ADRIAN HOMES	3883	ADRIAN CAPE MOD	18090	28
ADRIAN HOMES	3883	ADRIAN CAPE MOD	18090	30
ADRIAN HOMES	3883	ADRIAN CAPE MOD (O-S,T)	18091	28
ADRIAN HOMES	3883	ADRIAN CAPE MOD (T)	18092	28
ADRIAN HOMES	3883	ADRIAN CAPE MOD (T-M)	18093	28
ADRIAN HOMES	3883	ADRIAN MOD	18094	28
ADRIAN HOMES	3883	ADRIAN MOD	18094	30
ADRIAN HOMES	3883	ADRIAN MOD (L-M)	18095	28
ADRIAN HOMES	3883	ADRIAN MOD (O-S,T)	18096	28
ADRIAN HOMES	3883	ADRIAN MOD (T)	18097	28
ADRIAN HOMES	3883	ADRIAN MOD (T-M)	18098	28
ADRIAN HOMES	3883	ADRIAN SERIES I	18099	28
ADRIAN HOMES	3883	ADRIAN SERIES I	18099	32
ADRIAN HOMES	3883	ADRIAN SERIES II	18100	28
ADRIAN HOMES	3883	ADRIAN SERIES II	18100	32
ADRIAN HOMES	3883	AK SERIES	18122	28
ADRIAN HOMES	3883	AK SERIES	18122	32
ADRIAN HOMES	3883	AMBERCREST	18166	28
ADRIAN HOMES	3883	AMBERCREST	18166	32
ADRIAN HOMES	3883	AMBERCREST (O-S,T)	18167	28
ADRIAN HOMES	3883	ASHTON	18327	28

The purpose of the NADA Valid report is to provide the user with a list of widths that are used in the NADA valuation process. The report should allow the user to check the validity of information provided on manufactured housing.

# Manufactured Housing Depreciation

The depreciation tables for manufactured housing can be found on the Tools menu under the Depreciation item. There are two menu options as shown below for manufactured housing depreciation tables: Non Prebill and Prebill Mobile Homes.



The **Non Prebill Mobile Home Tables...** option is used in the depreciation of homesteaded manufactured homes. Non-homesteaded homes are depreciated with the **Prebill Mobile Home Tables...** option. The functionality is the same for both tables. Below is an example of the depreciation table for Non Prebill mobile homes.

A screenshot of the 'WinGAP - Depreciation - Non-Prebill Mobile Homes' dialog box. On the left, there is a list of 'Grade-Frame-Age' entries, with '00-A- 0' selected. On the right, there are two sections: 'Depreciation Group' and 'Depreciation Factors'. The 'Depreciation Group' section has input fields for 'Grade: 0.00', 'Frame:', and 'Age: 0'. The 'Depreciation Factors' section contains a table with columns 'Ex:', 'Gd:', 'Av:', 'Fr:', and 'Pr:'. The table has five rows of data, with the first row showing all zeros and the subsequent rows showing values like 0.95, 0.97, 0.98, and 0.99. At the bottom of the dialog box are buttons for 'Help', 'Cancel', 'New', 'Delete', 'Apply', and 'OK'.

The table consists of age increments with associated depreciation factors under the Life Expectancies of 15 – 40. Entries should not be made in any other fields other than the Life Expectancies of 15 - 40 in the Depreciation Factors section of the screen.

As many age increments as needed can be added to the table by

- ☐ Clicking **New**
- ☐ Completing the data entry in Age and the Life Expectancy fields.
- ☐ Clicking Apply/OK to save

Following is the interpolation routine that is used to determine the depreciation factor when the difference in the age increments is greater than one.

1. **Depr Increment = abs(Depr from Lower Age Level – Depr from Higher Age Level)**
2. **Inc Factor = Depr Inc / abs(Higher Age Level – Lower Age Level) {rnd to 2 dec}**
3. **Depr Adj = (Act Age – Lower Age Level) \* Inc Factor {rnd to 2 dec}**
4. **Calc Dep = Depr from Lower Age Level – Depr Adj**

Following is an example of interpolating depreciation using a commercial improvement with an age of 7 and a depreciation table with a 5 year age level with depreciation of .95 and a 10 year age level with depreciation of .82.

Age	Depr Factor
5	.95
10	.82

Dep Increment =  $.95 - .82 = .13$

Inc Factor =  $.13 / \text{abs}(10 - 5) = .13 / 5 = .03$  {round to 2 dec}

Depr Adj =  $(7 - 5) * .03 = 2 * .03 = .06$  {round to 2 dec}

Calc Dep =  $.95 - .06 = .89$

# Manufactured Housing Calculations

The process of calculating a value for a manufactured home is comprised of the following basic steps:

- ❑ Locating the mfg/model in the Mfg/Model Listing schedule and obtaining the class and life expectancy. If the class assigned to the home is different than the class in the Mfg/Model Listing, the home's class will be used. Also, the life expectancy associated with the home's class will be used.
- ❑ Using the class and the length and width, obtain the base dollar per square foot value from the Base Rate (used to say Size Adjustment) Table. If there is not a direct match of the length and width in the table, the closest fit is made in the following manner:
  - The next higher width is taken. For example, if the width assigned to the home is 25 and the table contains widths of 24 and 26, the table lookup would be 26. If the width exceeds the maximum width in the table, the table's maximum width is used.
  - Another table lookup is performed using the table width, in the case above, 26 and the length of the home. If there is no exact match and the length of the home does not exceed the maximum length in the table, the base rate at the next higher length is used. For example, if the size of the home is 25 x 41, the lookup in the table will use the base rate at the 26 x 44 length.
- ❑ All characteristic \$ / square feet amounts are adjusted based on the quality class multipliers and added to the base rate
- ❑ The adjusted base rate is then multiplied by the area of the home. However, a flaw has been discovered in the calculation process in that the width of the home is not used in calculating the area. Instead, the width from the size adjustment table where the base rate was obtained is being used. With dimensions of 25 x 41, the area of the home would be calculated base on 26 x 41.
- ❑ Lump sum characteristic items after being adjusted for quality class are added to the result of the adjusted base rate times the area producing the base value of the home.
- ❑ If a tip-out exists, the area of the tip-out is multiplied by the adjusted base rate and then by the tip-out adjustment assigned by the user producing the tip-out value.
- ❑ The base value of the home and the tip-out value are summed generating the replacement cost new
- ❑ The depreciation is obtained from the depreciation table and adjusted by the condition multiplier
- ❑ Depreciation, functional obsolescence and economic obsolescence are applied to the replacement cost new producing the value of the home
- ❑ Addon values are summed and added to the value of the home resulting in the fair market value.

If the market approach is used to generate a value, both “box” values will be shown on the screen. The market value will be shown in the NADA field. The field MH Calc will hold the cost value. The appraiser should select the value that better represents fair market. The selected value is then added to the sum of the Addons and is displayed in the Total field after Apply is clicked.

WinGAP - Manufactured Housing - ALLISON PATTY : 1 of 1

MH Key : 3615 - 1999 28 x 44 Buccaneer Homes PIN J65B-00 -077 -

Appraiser Stevie Key 3615

Review Date 09/21/2010

**Improvement Information**

Mfg Buccaneer Homes Story Height 1 Story

Model Admiral Decal Yr Decal No

Class Average Serial No ALBUS3W10982046AB

Year Model 1999 Purch Price 0

Eff Yr Blt Exempt Yr Purchased

Size 28 x 44 Tip Out

Size 0 x 0 = 0 Adj 0.00

Transfer

Transfer to Homestead

**Characteristics**

Ext Wall Vinyl Heat/Air Central Heat/AC Full Baths 1

Roofing Asphalt Shingle Fireplace Half Baths 1

Foundation Piers Bedrooms 2 Single Fxt 0

**Previous Values**

Prev Box 28,234 Prev Addon 60 Total Previous 28,294

**Location Info**

House No 550 Ext Direction

Street Macon

St Type Hwy Quad

Park Pine Ridge Lot No 43

Tax District 01 - Unincorporated

**Depreciation**

Condition Excellent

Calc Dep 0.92

Ovr Dep 0.00

Func Obs 1.00

Econ Obs 1.00

**Values**

RCN 31,389 MAV Ovr

NADA 0

MH Calc 28,878 28,234

MH Ovr 0

Add-Ons 60 60

Total 28,938 28,294

Last Calc 28,938

**Comments**

WARD PROP

Cancel New Delete Apply OK

## Manufactured Housing Exercise

1. Calculate the value of a mfg home using the schedules and procedures discussed on pages 71-94. The characteristics of the home are as follows:

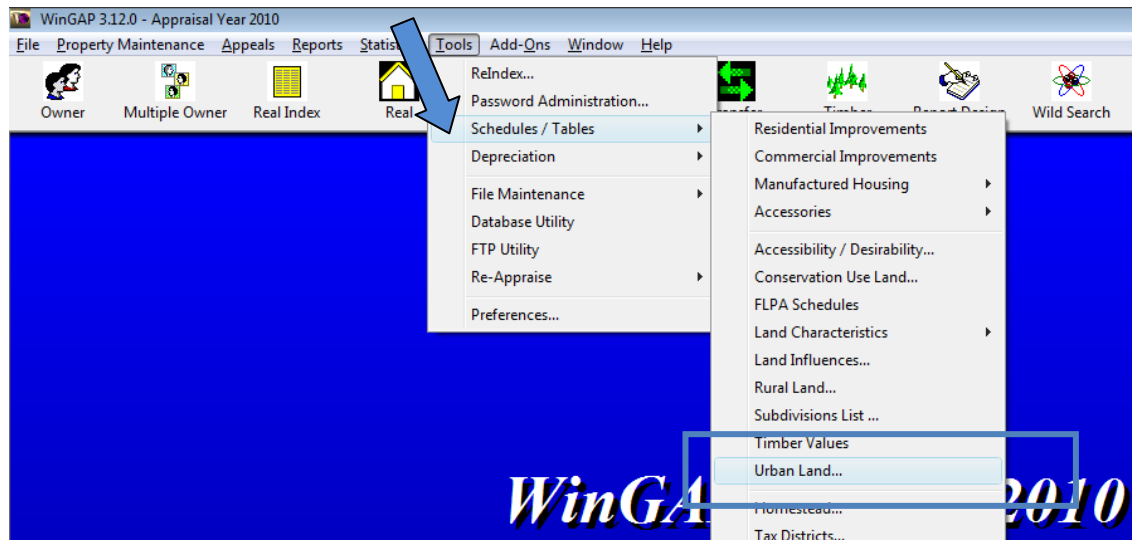
Item	Value
Size	32 x 78
Class	Average
Condition	Excellent
Year Built	2003
Exterior Wall	Vinyl
Misc Items	Pre-fab 1 sty 1 box
Heat	Cent Heat/AC
Baths	3 full
Carport	24 x 16

Item	Cost
Base	36.40
Vinyl	.50
Cent Heat/AC	5.00
\$/SF Total	41.90
Box Value (32 * 78 * 41.90)	104,582
Baths (3 * 700)	2,100
Fireplace	900
Total Box Value	107,582
Carport (24 * 16 * 20.00)	7,680
RCN	115,262
Depr (.97 * 1.15)	1.00
FMV	115,262

# Urban Land Schedules

## Urban Land Schedule

The Urban Land schedule is found under **Tools >> Schedule / Tables >> Urban Land** as shown below.



Selecting the Urban Land option will produce the Urban Land schedule, examples of which are seen below and on the next page.

WinGAP - Urban Land

**Subdivision / Neighborhood**

SUBDIVNAME	SUBDIVCODE	CALCMETHOD	UNITVALUE	EXUNITS	EXFACTOR	DEPTHBL
63A	206	3	2.00	0.00	0.00	0
63A	207	2	10000.00	0.00	0.00	0
63A	208	2	20000.00	0.00	0.00	0
63A	209	2	5000.00	0.00	0.00	0
63A	211	4	5000.00	0.00	0.00	0
63A 1-75	210	3	1.50	0.00	0.00	0
BARFIELD EST.	9	1	60.00	0.00	0.00	0
BRAXTON & SNYDER	100	4	5000.00	0.00	0.00	0
BYROMVILLE COMMERCIAL	202	1	75.00	0.00	0.00	0
BYROMVILLE	17	1	40.00	0.00	0.00	0
BYROMVILLE	203	1	40.00	0.00	0.00	0
BYROMVILLE	204	2	2500.00	0.00	0.00	0
CAPE	71	1	60.00	0.00	0.00	0
CLEMENTS POND	75	1	50.00	0.00	0.00	0
OVERDALE ESTATES	85	4	7000.00	0.00	0.00	0

**Information**

Name: 63A

Unit Value: 2.00

Excessive Units: 0.00

Excessive Adj Factor: 0.00

**Valuation Method**

☐ Front Foot (1) ☒ Square Foot (3) ☐ Acres (2) ☐ Lot / Unit (4)

Help Cancel Delete New Apply OK



WinGAP - Urban Land

**Subdivision / Neighborhood**

SUBDIVNAME	SUBDIVCODE	CALCMETHOD	UNITVALUE	EXUNITS	EXFACTOR	DEPTHBL
110/FF	19	1	110.00	0.00	0.00	0
12,000/AC	50	2	12000.00	0.00	0.00	0
120/FF	20	1	120.00	0.00	0.00	0
130/FF	21	1	130.00	0.00	0.00	0
14,000/AC	51	2	14000.00	0.00	0.00	0
140/FF	22	1	140.00	0.00	0.00	0
15,000/AC	52	2	15000.00	0.00	0.00	0
15/FF	1	1	15.00	0.00	0.00	0
150/FF	23	1	150.00	0.00	0.00	0
1500/AC	29	2	1500.00	0.00	0.00	0
160/FF	24	1	160.00	0.00	0.00	0
170/FF	25	1	170.00	0.00	0.00	0
175/FF	26	1	175.00	0.00	0.00	0
20/FF	2	1	20.00	0.00	0.00	0
20000/AC	30	2	20000.00	0.00	0.00	0

**Information**

Name: 110/FF

Unit Value: 110.00

Excessive Units: 0.00

Excessive Adj Factor: 0.00

Default Depth: None

**Valuation Method**

☒ Front Foot (1)
 ☐ Square Foot (3)
 ☐ Acres (2)
 ☐ Lot / Unit (4)

Help Cancel Delete New Apply OK

The valuation of Urban Land involves setting up Subdivisions and Neighborhoods within the County. The Subdivision/Neighborhood represents a group of parcels where the pricing method and unit cost are consistent throughout. The pricing method refers to the manner in which the parcels are valued, i.e. front foot, acre, square foot, or by the lot. Unit cost is the value per unit that is assigned by the appraiser.

The Urban Land schedule allows the appraiser to enter as many schedule items as needed to value urban land. Urban land schedule entries can be setup to value land by four different methods:

- ☐ Front Foot (displayed in yellow in the list box)
- ☐ Square Foot (displayed in blue in the list box)
- ☐ Acre (displayed in orange in the list box)
- ☐ Lot (displayed in green in the list box)

Unit values, default depth tables (when needed), excessive units and excessive unit factors can be assigned to each entry.

Following are the fields that appear on the screen and their explanations.

- ☐ **Name:** The name of the urban land schedule entry should be keyed in this field. The name could represent a subdivision or some other area of valuation. The Name can be up to thirty characters in length and can be any combination of letters, numbers, or characters.
- ☐ **Valuation Method:** The valuation method should be selected from the options available within this group. There are four available Valuation Methods for Urban Land: Front Foot, Acre, Square Foot, and Lot. The Valuation Method is selected by clicking the radio button for the desired method. If the Front Foot method is selected, the number 1 will appear in the Calculation Method column in the list box for that Subdivision; if the Acre method is selected, the number 2 will appear in the Calculation Method column; if the Square Foot

method is selected, the number 3 will appear in the Calculation Method column; and if the Lot method is selected, the number 4 will appear in the Calculation Method column in the list box for that Subdivision.

- ☐ **Unit Value:** The dollar amount that will be used to value land assigned to the schedule item per Front Foot, Acre, Square Foot, or Lot for that Subdivision/Neighborhood.
- ☐ **Excessive Units:** The number of units where size becomes an issue in the valuation process. Excessive Units are normally used when the appraiser wants to reduce the value of land within the Subdivision when the land exceeds a certain size. For example, a Subdivision uses the Front Foot Valuation Method with a value of \$24 per Front Foot. The appraiser determines that subrecords within this Subdivision that have Frontage greater than 200 feet should have the Front Foot value reduced by a factor of .85 due to their excessive size. 200 would be keyed in the Excessive Units field, and the adjustment of 0.85 would be keyed in the Excessive Adjustment Factor field. All four Valuation Methods can utilize the Excessive Units and Excessive Units Adjustment Factor as desired by the appraiser.
- ☐ **Excessive Adj Factor:** The size adjustment that will be applied to units above the excessive units. The Factor is usually less than 1.00. If a value is keyed in the Excessive Units field, an Adjustment Factor greater than zero must be keyed in this field.
- ☐ **Default Depth:** The default depth table that will be assigned to the schedule item. The Default Depth only appears when the Valuation Method is Front Foot. The appraiser has a choice of six options:
  - ☐ None
  - ☐ 100
  - ☐ 150
  - ☐ 200
  - ☐ 250
  - ☐ 300

The Default Depth for the Subdivision will appear on the Urban Land section of the Land Information Form when the subrecord for this Subdivision is added or edited. All Urban Land subrecords for this Subdivision should use this Default Depth.

New Urban Land schedule entries can be made by:

- ☐ Clicking New
- ☐ Completing the data entry in the fields
- ☐ Clicking Apply or OK to save

A maximum of 99,999 entries can be made in the Urban Land table.

Urban Land schedule entries can be modified by:

- ☐ Selecting the item
- ☐ Editing the data
- ☐ Clicking Apply or OK to save

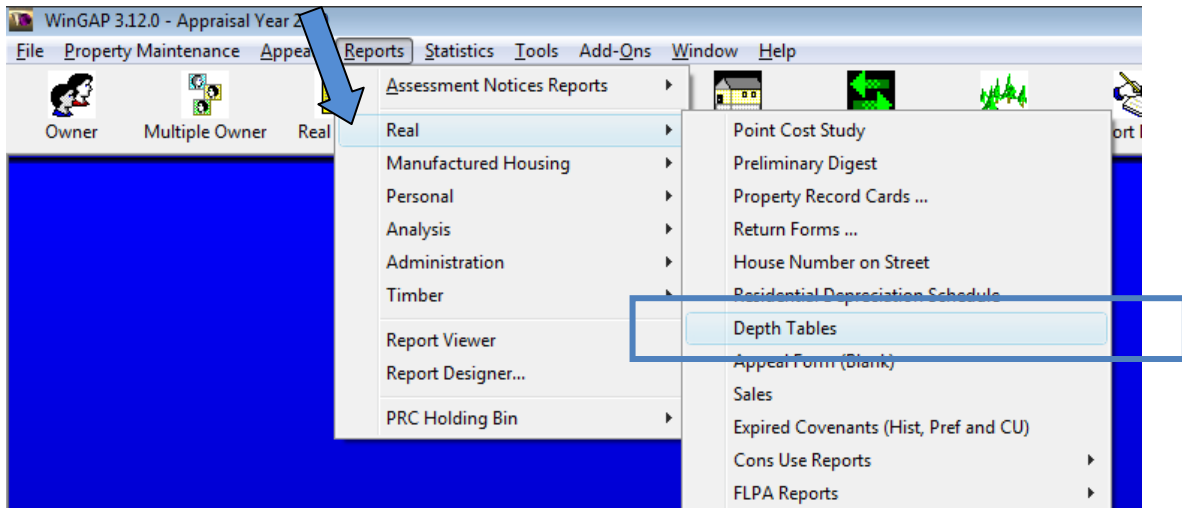
An entry can be removed from the schedule by:

- ☐ Selecting the item
- ☐ Clicking Delete

If the schedule item has been assigned to a parcel, the user will be notified and the deletion effort will be cancelled.

## Depth Tables

Currently, there is no menu access to the depth tables. The tables can be printed by using the menu option **Reports >> Real >> Depth Tables** as shown below.



An example of the report is shown below.

Preview -

Page 1

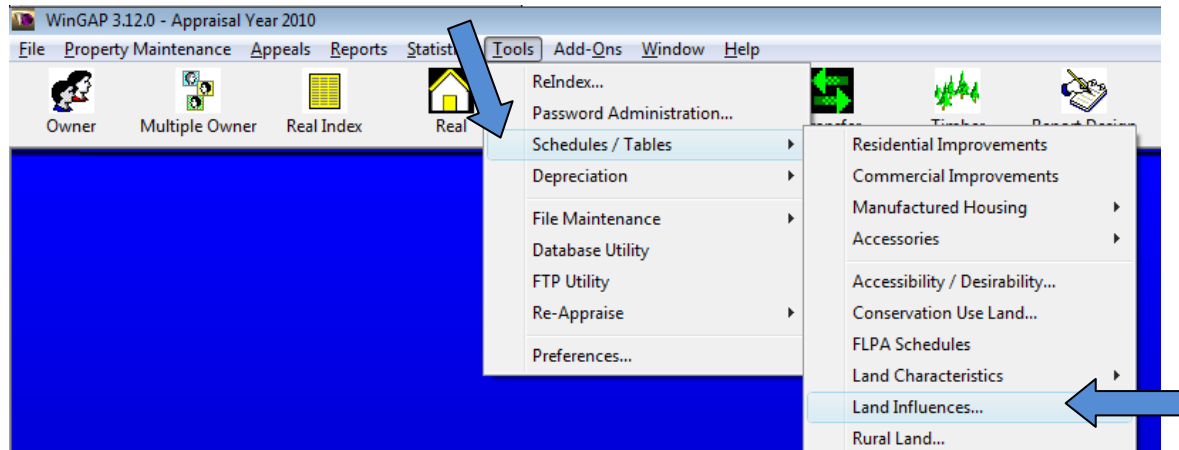
09/21/2010

**Depth Tables**

Depth	100	150	200	250	300
1	0.0160	0.0107	0.0080	0.0064	0.0053
2	0.0320	0.0213	0.0160	0.0128	0.0107
3	0.0480	0.0320	0.0240	0.0192	0.0160
4	0.0640	0.0427	0.0320	0.0256	0.0213
5	0.0800	0.0533	0.0400	0.0320	0.0267
6	0.0960	0.0640	0.0480	0.0384	0.0320
7	0.1120	0.0747	0.0560	0.0448	0.0373
8	0.1280	0.0853	0.0640	0.0512	0.0427
9	0.1440	0.0960	0.0720	0.0576	0.0480
10	0.1600	0.1067	0.0800	0.0640	0.0533
11	0.1760	0.1173	0.0880	0.0704	0.0587
12	0.1920	0.1280	0.0960	0.0768	0.0640
13	0.2080	0.1387	0.1040	0.0832	0.0693
14	0.2240	0.1493	0.1120	0.0896	0.0747
15	0.2400	0.1600	0.1200	0.0960	0.0800
16	0.2560	0.1707	0.1280	0.1024	0.0853
17	0.2720	0.1813	0.1360	0.1088	0.0907
18	0.2880	0.1920	0.1440	0.1152	0.0960
19	0.3040	0.2027	0.1520	0.1216	0.1013

## Land Influences

Another item involved in the pricing of Urban Land is Land Influences. The Land Influences schedule is found on the **Tools >> Schedules / Tables** menu, as seen below, and allows the County to define various types of Land Influences that can be applied on the parcel level to affect land values.



The items in the Land Influences schedule, below, can be accessed for each parcel in WinGAP on the upper right side of the Land Information Form at any time that either Urban or Rural Land is added or edited. Up to seven different Land Influences, each with a percentage adjustment, can be applied to a parcel. Note that the Influence adjustment is applied on the Land Information Form, not on the Land Influences Form; the items are purely descriptive on the Land Influences Form itself.

A screenshot of the 'WinGAP - Background Information : PROP CHAR INFLUENCE' dialog box. On the left is a list box containing the following items: Topography (selected), Corner, View, Water, Transitional, Neighborhood, and Other. To the right of the list box, there are input fields for 'Code:' (containing '001') and 'Descrip:' (containing 'Topography'). Below these is a section titled 'Values' containing three rows of input fields: 'Lump Sum \$' with a value of '0', '\$ / Square Feet' with a value of '0.00', and 'Cost Multiplier' with a value of '0.00'. Each of these three rows has a small calculator icon to its right. At the bottom of the dialog box are five buttons: Help, Cancel, New, Delete, and Apply, followed by an OK button.

These Influences affect the value of the land for each parcel. They can be applied in either a compound (multiplicative) or additive manner, based upon how the County wishes to apply Land Influences to land value, and they must be either one or the other; they cannot be both.

The formula for Compound application (the manner in which Land Influences are more commonly applied within WinGAP) of Land Influences is as follows: Base Land \* Influence1 \* Influence2 \* Influence3 \* Influence4 \* Influence5 \* Influence6 \* Influence7 \* Neighborhood Influence. The formula for Additive application of Land Influences is as follows: (Base Land + [(1-Influence1) \*

Base Land] + [(1-Influence2) \* Base Land] + [(1-Influence3) \* Base Land] + [(1-Influence4) \* Base Land] + [(1-Influence5) \* Base Land] + [(1-Influence6) \* Base Land] + [(1-Influence70 \* Base Land)] \* Neighborhood Influence.

In the above formulas, Base Land is the value of the land resulting from the calculation of the land subrecords. In the case of Rural Land, the Base Land value would include the application of the Accessibility/Desirability factor.

The Land Influences combo box in **Tools >> Preferences** is used to select either the **Compound** or **Additive** type of Land Influence, and the user should see that section of the manual for a more detailed discussion of how Land Influences are used to affect land value.

Existing Land Influences are displayed in the list box on the left side of the Land Influences Form. A **new** Land Influence schedule item can be added by clicking the "New" button, keying in the type in the **Description** field, and then clicking "Apply" or "OK". There is no limit to the number of Land Influences that can be added to this schedule. However, there is a maximum of seven different Land Influences that can be applied at the parcel level.

An **existing** Land Influence schedule item can be edited by clicking on the desired type and editing the Description field. At the present time, it is not possible to **delete** a Land Influence schedule item.

## Urban Land Exercises

1. Calculate the value of lot that has the dimensions of 120 front feet and a depth of 18. The standard depth table for the subdivision is a 100 foot table (see page 99). The unit price is 30.00.

2. Calculate the value of a lot that is priced by the acre and contains 5.00 acres. The unit price is 12,000.00. Excessive units are 2.00 acres and the Excessive Adj Factor is .80.

# APPENDIX

## Commercial/Industrial Improvement Calculation Worksheet

Comm Base Cost		
Used As Cost	X	
St Ht Mod	X	
Wall Ht Mod (low end)	X	
A/P Mod (high end)	X	
Const Cost Mod	X	
\$/Sq Ft before Adds (2)	=	
Grade	X	
Adj \$/Sq Ft before Adds (6)	=	
\$Total Adj Adds (6)	+	
\$Sq Ft (6)	=	
Bldg Base Area	X	
RCN Structure Value (0)	=	
Phy Dep	X	
Econ Obsol	X	
Func Obsol	X	
Other Factor	X	
Pct Complete	X	
Neighborhood Factor	X	
Structure Value (0)	=	
Extra Feature Value	+	
Bldg/Section Value	=	
FMV (0)		

### Adds Sum Calculations (example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish		X		X		=	
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC		X		X		=	
<b>Total Adds</b>						$\Sigma$	
<b>Grade</b>						X	
<b>Adj Adds (6)</b>						=	

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		
OV EF Values	+	
Total EF Values	=	



## Commercial/Industrial Improvement Calculation Worksheet

Comm Base Cost		
Used As Cost	X	
St Ht Mod	X	
Wall Ht Mod (low end)	X	
A/P Mod (high end)	X	
Const Cost Mod	X	
\$/Sq Ft before Adds (2)	=	
Grade	X	
Adj \$/Sq Ft before Adds (6)	=	
\$Total Adj Adds (6)	+	
\$/Sq Ft (6)	=	
Bldg Base Area	X	
RCN Structure Value (0)	=	
Phy Dep	X	
Econ Obsol	X	
Func Obsol	X	
Other Factor	X	
Pct Complete	X	
Neighborhood Factor	X	
Structure Value (0)	=	
Extra Feature Value	+	
Bldg/Section Value	=	
FMV (0)		

### Adds Sum Calculations (example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish		X		X		=	
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC		X		X		=	
<b>Total Adds</b>						Σ	
<b>Grade</b>						X	
<b>Adj Adds (6)</b>						=	

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		
OV EF Values	+	
Total EF Values	=	

## Commercial/Industrial Improvement Calculation Worksheet

Comm Base Cost		
Used As Cost	X	
St Ht Mod	X	
Wall Ht Mod (low end)	X	
A/P Mod (high end)	X	
Const Cost Mod	X	
\$/Sq Ft before Adds (2)	=	
Grade	X	
Adj \$/Sq Ft before Adds (6)	=	
\$Total Adj Adds (6)	+	
\$/Sq Ft (6)	=	
Bldg Base Area	X	
RCN Structure Value (0)	=	
Phy Dep	X	
Econ Obsol	X	
Func Obsol	X	
Other Factor	X	
Pct Complete	X	
Neighborhood Factor	X	
Structure Value (0)	=	
Extra Feature Value	+	
Bldg/Section Value	=	
FMV (0)		

### Adds Sum Calculations (example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish		X		X		=	
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC		X		X		=	
<b>Total Adds</b>						Σ	
<b>Grade</b>						X	
<b>Adj Adds (6)</b>						=	

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		
OV EF Values	+	
Total EF Values	=	

## Commercial/Industrial Improvement Calculation Worksheet

Comm Base Cost		
Used As Cost	X	
St Ht Mod	X	
Wall Ht Mod (low end)	X	
A/P Mod (high end)	X	
Const Cost Mod	X	
\$/Sq Ft before Adds (2)	=	
Grade	X	
Adj \$/Sq Ft before Adds (6)	=	
\$Total Adj Adds (6)	+	
\$/Sq Ft (6)	=	
Bldg Base Area	X	
RCN Structure Value (0)	=	
Phy Dep	X	
Econ Obsol	X	
Func Obsol	X	
Other Factor	X	
Pct Complete	X	
Neighborhood Factor	X	
Structure Value (0)	=	
Extra Feature Value	+	
Bldg/Section Value	=	
FMV (0)		

### Adds Sum Calculations (example)

Struc Element	\$ / SF		% Coverage		Sty Ht Fact		Adj \$ / SF (2)
Foundation		X		X		=	
Wall Frame		X		X		=	
Exterior Wall		X		X		=	
Roof Frame		X		X		=	
Roof Cover		X		X		=	
Flr Construction		X		X		=	
Floor Finish		X		X		=	
Interior Wall		X		X		=	
Ceiling Finish		X		X		=	
Wiring		X		X		=	
Heat / AC		X		X		=	
<b>Total Adds</b>						Σ	
<b>Grade</b>						X	
<b>Adj Adds (6)</b>						=	

**Extra Feature Square Foot Calculations (example)**

Comm Base Cost	X	Used As Cost	X	Rank Mult	X	Area	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – WinGap Calculation (example)**

Table Points	X	Comm Pt Cost	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		X		=			X		X		=

**Extra Feature Lump Sum Calculations – User Calculation (example)**

Unit Dollars	X	Rank Mult	X	Units	=	Raw EF Value (0)		Grade		Accum Other Factors		Ex Feat Value
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=
	X		X		=			X		X		=

**Extra Feature Overrides (example)**

Extra Feature #		Value
	+	
	+	
	+	
	+	
	+	
	+	
Sum of EF Ovr's	=	

**Extra Feature Value Consolidation (example)**

Sum EF Values		
OV EF Values	+	
Total EF Values	=	

## Worksheets for Building Commercial Schedules

### Commercial/Industrial Building Types

Description	Code

Item	Value		Current Cost		Local		Adj Value	Action

Class	Type	Cost	/	Base Cost	=	Cost Modifier

## Worksheets for Building Commercial Schedules

### Commercial/Industrial Building Types

Description	Code

Item	Value		Current Cost		Local		Adj Value	Action

Class	Type	Cost	/	Base Cost	=	Cost Modifier



## **Commercial Schedules**

### **Commercial Schedules - Preferences**

<b>Commercial Point Cost</b>	<b>100.00</b>
<b>Commercial Base Cost</b>	<b>1.00</b>
<b>Commercial Depr Year</b>	<b>2001</b>

Description	Used As Code	Building Type	Pricing	Base Cost	Table																				
APTS - ELDERLY ASSISTED LIVN	1050	099 - General Bldgs	SF	52.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>0</td><td>0</td><td>55</td><td>50</td><td>50</td><td>0.00</td><td>0.00</td><td>1.00</td><td>0.96</td><td>0.95</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	0	0	55	50	50	0.00	0.00	1.00	0.96	0.95
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
0	0	55	50	50	0.00	0.00	1.00	0.96	0.95																
APTS - HIGH RISE	1100	011 - Apts, Club Hse, Motels - 11	SF	49.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>55</td><td>55</td><td>50</td><td>45</td><td>45</td><td>1.33</td><td>1.28</td><td>1.00</td><td>0.94</td><td>0.92</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	55	55	50	45	45	1.33	1.28	1.00	0.94	0.92
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
55	55	50	45	45	1.33	1.28	1.00	0.94	0.92																
Income Model 1 - Mini-Wharehouses																									
APTS - LUXURY (HIGH RISE)	1150	099 - General Bldgs	SF	83.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>55</td><td>55</td><td>50</td><td>45</td><td>45</td><td>1.30</td><td>1.25</td><td>1.00</td><td>0.98</td><td>0.94</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	55	55	50	45	45	1.30	1.25	1.00	0.98	0.94
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
55	55	50	45	45	1.30	1.25	1.00	0.98	0.94																
APTS - RESIDENTS	1200	099 - General Bldgs	SF	42.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>0</td><td>0</td><td>55</td><td>50</td><td>50</td><td>0.00</td><td>0.00</td><td>1.00</td><td>0.95</td><td>0.94</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	0	0	55	50	50	0.00	0.00	1.00	0.95	0.94
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
0	0	55	50	50	0.00	0.00	1.00	0.95	0.94																
APTS - RETIREMENT COMPLEX	1250	099 - General Bldgs	SF	72.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>0</td><td>0</td><td>55</td><td>50</td><td>50</td><td>0.00</td><td>0.00</td><td>1.00</td><td>0.96</td><td>0.95</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	0	0	55	50	50	0.00	0.00	1.00	0.96	0.95
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
0	0	55	50	50	0.00	0.00	1.00	0.96	0.95																
APTS - SENIOR CITIZENS	1300	099 - General Bldgs	SF	46.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>0</td><td>0</td><td>55</td><td>50</td><td>50</td><td>0.00</td><td>0.00</td><td>1.00</td><td>0.95</td><td>0.94</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	0	0	55	50	50	0.00	0.00	1.00	0.95	0.94
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
0	0	55	50	50	0.00	0.00	1.00	0.95	0.94																
BANK - BRANCH	1700	015 - Office,Public Bldg - 15	SF	83.00	0																				
<table><tr><td><u>Life1</u></td><td><u>Life2</u></td><td><u>Life3</u></td><td><u>Life4</u></td><td><u>Life5</u></td><td><u>CC Mod1</u></td><td><u>CC Mod2</u></td><td><u>CC Mod3</u></td><td><u>CC Mod4</u></td><td><u>CC Mod5</u></td></tr><tr><td>55</td><td>55</td><td>50</td><td>45</td><td>45</td><td>1.31</td><td>1.25</td><td>1.00</td><td>0.95</td><td>0.92</td></tr></table>						<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>	55	55	50	45	45	1.31	1.25	1.00	0.95	0.92
<u>Life1</u>	<u>Life2</u>	<u>Life3</u>	<u>Life4</u>	<u>Life5</u>	<u>CC Mod1</u>	<u>CC Mod2</u>	<u>CC Mod3</u>	<u>CC Mod4</u>	<u>CC Mod5</u>																
55	55	50	45	45	1.31	1.25	1.00	0.95	0.92																

Description	Used As Code	Building Type	Pricing	Base Cost	Table																				
BANK - CENTRAL OFFICE	1750	099 - General Bldgs	SF	81.00	0																				
<table><tr><td>Life1</td><td>Life2</td><td>Life3</td><td>Life4</td><td>Life5</td><td>CC Mod1</td><td>CC Mod2</td><td>CC Mod3</td><td>CC Mod4</td><td>CC Mod5</td></tr><tr><td>55</td><td>55</td><td>50</td><td>45</td><td>45</td><td>1.28</td><td>1.24</td><td>1.00</td><td>0.96</td><td>0.93</td></tr></table>						Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5	55	55	50	45	45	1.28	1.24	1.00	0.96	0.93
Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5																
55	55	50	45	45	1.28	1.24	1.00	0.96	0.93																
BANK - MINI (WALK UP/DRIVE TH	1800	099 - General Bldgs	SF	155.00	0																				
<table><tr><td>Life1</td><td>Life2</td><td>Life3</td><td>Life4</td><td>Life5</td><td>CC Mod1</td><td>CC Mod2</td><td>CC Mod3</td><td>CC Mod4</td><td>CC Mod5</td></tr><tr><td>50</td><td>50</td><td>45</td><td>40</td><td>40</td><td>1.29</td><td>1.29</td><td>1.00</td><td>0.98</td><td>0.94</td></tr></table>						Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5	50	50	45	40	40	1.29	1.29	1.00	0.98	0.94
Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5																
50	50	45	40	40	1.29	1.29	1.00	0.98	0.94																
COMPUTER (DATA) CENTERS	3100	099 - General Bldgs	SF	72.00	0																				
<table><tr><td>Life1</td><td>Life2</td><td>Life3</td><td>Life4</td><td>Life5</td><td>CC Mod1</td><td>CC Mod2</td><td>CC Mod3</td><td>CC Mod4</td><td>CC Mod5</td></tr><tr><td>45</td><td>45</td><td>40</td><td>35</td><td>35</td><td>1.24</td><td>1.24</td><td>1.00</td><td>0.97</td><td>0.95</td></tr></table>						Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5	45	45	40	35	35	1.24	1.24	1.00	0.97	0.95
Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5																
45	45	40	35	35	1.24	1.24	1.00	0.97	0.95																
MOTELS	6450	099 - General Bldgs	SF	50.00	0																				
<table><tr><td>Life1</td><td>Life2</td><td>Life3</td><td>Life4</td><td>Life5</td><td>CC Mod1</td><td>CC Mod2</td><td>CC Mod3</td><td>CC Mod4</td><td>CC Mod5</td></tr><tr><td>0</td><td>0</td><td>40</td><td>35</td><td>35</td><td>0.00</td><td>0.00</td><td>1.00</td><td>0.97</td><td>0.96</td></tr></table>						Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5	0	0	40	35	35	0.00	0.00	1.00	0.97	0.96
Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5																
0	0	40	35	35	0.00	0.00	1.00	0.97	0.96																
Income Model 2 - Motels/Hotels																									
OFFICE BUILDINGS	6800	015 - Office,Public Bldg - 15	SF	54.00	0																				
<table><tr><td>Life1</td><td>Life2</td><td>Life3</td><td>Life4</td><td>Life5</td><td>CC Mod1</td><td>CC Mod2</td><td>CC Mod3</td><td>CC Mod4</td><td>CC Mod5</td></tr><tr><td>55</td><td>55</td><td>50</td><td>45</td><td>45</td><td>1.46</td><td>1.40</td><td>1.00</td><td>2.00</td><td>0.89</td></tr></table>						Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5	55	55	50	45	45	1.46	1.40	1.00	2.00	0.89
Life1	Life2	Life3	Life4	Life5	CC Mod1	CC Mod2	CC Mod3	CC Mod4	CC Mod5																
55	55	50	45	45	1.46	1.40	1.00	2.00	0.89																

Bldg Type	Area/Perimeter Ratio	Area/Perimeter Factor
<i>015 Office,Public Bldg - 15</i>		
	5.00000	1.30
	6.00000	1.24
	7.00000	1.19
	8.00000	1.14
	9.00000	1.11
	10.00000	1.08
	12.00000	1.04
	14.00000	1.02
	16.00000	1.00
	18.00000	0.98
	20.00000	0.96
	25.00000	0.93
	30.00000	0.92
	35.00000	0.91
	40.00000	0.90
	50.00000	0.88
	60.00000	0.86
	80.00000	0.83
	100.000	0.80
	120.000	0.78
	140.000	0.76
	160.000	0.75
	180.000	0.74
	200.000	0.73
	250.000	0.72
	300.000	0.70

Bldg Type	Area/Perimeter Ratio	Area/Perimeter Factor
<i>099 General Bldgs</i>		
	5.00000	1.30
	6.00000	1.24
	7.00000	1.19
	8.00000	1.14
	9.00000	1.11
	10.00000	1.08
	12.00000	1.04
	14.00000	1.02
	16.00000	1.00
	18.00000	0.98
	20.00000	0.96
	25.00000	0.93
	30.00000	0.92
	35.00000	0.91
	40.00000	0.90
	50.00000	0.88
	60.00000	0.86
	80.00000	0.83
	100.000	0.80
	120.000	0.78
	140.000	0.76
	160.000	0.75
	180.000	0.74
	200.000	0.73
	250.000	0.72
	300.000	0.70
	400.000	3.00
	500.000	3.10

Bldg Type	Wall Height	Wall Height Factor
<i>015 Office, Public Bldg - 15</i>		
	7	0.86
	8	0.89
	9	0.92
	10	0.94
	11	0.97
	12	1.00
	13	1.03
	14	1.06
	15	1.09
	16	1.12
	17	1.15
	18	1.18
	19	1.22
	20	1.26
	21	1.30
	22	1.33
	23	1.37
	24	1.41
	25	1.45
	26	1.49
	27	1.54
	28	1.58
	29	1.61
	30	1.64
	35	1.74
	40	1.83
	45	1.92
	50	2.00

Bldg Type	Wall Height	Wall Height Factor
<i>099 General Bldgs</i>		
	7	0.86
	8	0.89
	9	0.92
	10	0.94
	11	0.97
	12	1.00
	13	1.03
	14	1.06
	15	1.09
	16	1.12
	17	1.15
	18	1.18
	19	1.22
	20	1.26
	21	1.30
	22	1.33
	23	1.37
	24	1.41
	25	1.45
	26	1.49
	27	1.54
	28	1.58
	29	1.61
	30	1.64
	35	1.74
	40	1.83
	45	1.92
	50	2.00

Bldg Type 015 - Office,Public Bldg - 15

Struc Element	Code	Description	Low	Fair	Avg	Good	Excell
FLRFIN	2	Carpet/Vinyl Tile	1.30	1.90	2.70	3.80	5.20
FLRFIN	3	Carpet	1.30	1.90	2.70	3.80	5.20
FLRFIN	4	Vinyl Tile	1.40	2.00	3.10	4.60	6.50
FLRFIN	5	Quarry Tile	4.40	5.20	6.20	7.40	8.80
FLRFIN	6	Terrazzo	3.40	4.30	5.60	7.20	9.10
FLRFIN	7	Ceramic Tile	4.40	5.20	6.20	7.40	8.80
FLRFIN	8	Pine	2.60	3.10	3.70	4.40	5.20
FLRFIN	9	Hardwood	3.30	4.20	5.20	6.70	8.20
FLRFIN	10	Asphalt	0.80	0.90	1.00	1.20	1.40
HEATAC	2	Susp. Heaters	0.60	0.90	1.30	1.80	2.40
HEATAC	3	Forced Hot Air	1.40	2.10	3.10	4.60	6.10
HEATAC	4	Central Air Conditioning	1.60	2.30	3.40	5.10	7.40
HEATAC	5	Cent. Htg. & A.C.	2.20	3.10	4.50	6.30	8.50
HEATAC	6	Floor Furnace	0.70	0.90	1.10	1.30	1.50
HEATAC	7	Wall Furnace	0.70	0.90	1.10	1.30	1.50
HEATAC	8	Baseboard	1.40	2.00	2.90	4.20	5.90
HEATAC	9	Radiant	0.70	0.80	1.00	1.30	2.70
HEATAC	10	Steam Radiators	2.40	3.50	4.90	7.00	9.50
HEATAC	11	Susp. Ht's. & A.C.	2.20	3.20	4.70	6.90	9.80



**Bldg Type** 099 - General Bldgs

Struc Element	Code	Description	Low	Fair	Avg	Good	Excell
FLRFIN	2	Carpet/Vinyl Tile	1.30	1.90	2.70	3.80	5.20
FLRFIN	3	Carpet	1.30	1.90	2.70	3.80	5.20
FLRFIN	4	Vinyl Tile	1.40	2.00	3.10	4.60	6.50
FLRFIN	5	Quarry Tile	4.40	5.20	6.20	7.40	8.80
FLRFIN	6	Terrazzo	3.40	4.30	5.60	7.20	9.10
FLRFIN	7	Ceramic Tile	4.40	5.20	6.20	7.40	8.80
FLRFIN	8	Pine	2.60	3.10	3.70	4.40	5.20
FLRFIN	9	Hardwood	3.30	4.20	5.20	6.70	8.20
FLRFIN	10	Asphalt	0.80	0.90	1.00	1.20	1.40
HEATAC	2	Susp. Heaters	0.60	0.90	1.30	1.80	2.40
HEATAC	3	Forced Hot Air	1.40	2.10	3.10	4.60	6.10
HEATAC	4	Central Air Conditioning	1.60	2.30	3.40	5.10	7.40
HEATAC	5	Cent. Htg. & A.C.	2.20	3.10	4.50	6.30	8.50
HEATAC	6	Floor Furnace	0.70	0.90	1.10	1.30	1.50
HEATAC	7	Wall Furnace	0.70	0.90	1.10	1.30	1.50
HEATAC	8	Baseboard	1.40	2.00	2.90	4.20	5.90
HEATAC	9	Radiant	0.70	0.80	1.00	1.30	2.70
HEATAC	10	Steam Radiators	2.40	3.50	4.90	7.00	9.50
HEATAC	11	Susp. Htr's. & A.C.	2.20	3.20	4.70	6.90	9.80

Comp #	Description	Table Code	Price Code	Base Cost
X010	CANOPY	0	Square Foot	5.00
X011	OPEN PORCH	0	Square Foot	19.20
X012	DECK	0	Square Foot	15.00
X013	ENCLOSED PORCH	0	Square Foot	18.00
X014	PATIO	0	Square Foot	4.80
X015	FIREPLACE -Massive	01	Lump Sum	0.00
X016	OVERHEAD DOORS	02	Lump Sum	0.00
X200	VAULT DOOR	60	Lump Sum	1.00
X201	DEPOSIT CHUTES	61	Lump Sum	0.00
X202	DRIVE-UP WINDOW	62	Lump Sum	0.00
X203	VAULT	0	Square Foot	150.00
X500	BATH-3 FIX	50	Lump Sum	0.00
X501	BATH-2 FIX	51	Lump Sum	0.00
X502	BATH-SINGLE FIX	52	Lump Sum	0.00
xtes	test		Square Foot	1.00

Table Code	Description	Dim1	Dim2	Value
01	<i>FIREPLACE-Massive</i>			
		1	0	1,500.00
02	<i>OVERHEAD DOORS</i>			
		4	8	320.00
		7	10	700.00
		9	9	810.00
		10	10	1,000.00
		12	12	1,440.00
		22	15	3,300.00
		24	15	3,600.00
50	<i>BATH-3 FIX</i>			
		0	0	1,000.00
51	<i>BATH-2 FIX</i>			
		0	0	1,000.00
52	<i>BATH-SINGLE FIX</i>			
		0	0	400.00
60	<i>VAULT DOOR</i>			
		0	0	21,000.00
61	<i>DEPOSIT CHUTES</i>			
		0	0	6,750.00
62	<i>DRIVE-UP WINDOW</i>			
		0	0	5,750.00

12/20/09

Commercial Extra Feature Rank Table

1

Rank	Description	Multiplier
1	Excellent	1.50
2	Good	1.25
3	Average	1.00
4	Fair	0.75
5	Poor	0.50
6	No Value	0.00

Label	Description	Type	Cost Factor	Area Factor	\$/Sqft
1st	1 Story	Primary	1.0000	1.0000	0.000000
1stc	1stc	Primary	1.0000	1.0000	0.000000
2stc	2 Story	Primary	1.8000	2.0000	0.000000
3st	3 Story	Primary	2.9000	3.0000	0.000000
4th	4 Story	Primary	3.9000	4.0000	0.000000
5th	5 Sty	Primary	5.0000	5.0000	0.000000
tesx	test	Primary	1.0000	1.0000	0.000000
Test	Test Label	Primary	1.0000	1.0000	0.000000
Can	Canopy	Appendage	1.0000	1.0000	1.000000

Age	LE 5	LE 10	LE 15	LE 20	LE 25	LE 30	LE 35	LE 40	LE 45	LE 50	LE 55	LE 60	LE 65	LE 70	LE 75
1	0.00	0.00	0.96	0.96	0.97	0.98	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.00	0.00
2	0.00	0.00	0.91	0.91	0.95	0.96	0.98	0.98	0.98	0.99	0.99	0.99	0.99	1.00	0.00
3	0.00	0.00	0.87	0.87	0.92	0.95	0.96	0.97	0.98	0.98	0.99	0.99	0.99	0.99	0.00
4	0.00	0.00	0.83	0.83	0.90	0.93	0.95	0.96	0.97	0.98	0.98	0.99	0.99	0.99	0.00
5	0.00	0.00	0.78	0.78	0.87	0.91	0.94	0.95	0.96	0.97	0.98	0.99	0.99	0.99	0.00
6	0.00	0.00	0.74	0.74	0.84	0.89	0.93	0.93	0.95	0.96	0.98	0.98	0.98	0.99	0.00
7	0.00	0.00	0.70	0.70	0.82	0.87	0.92	0.92	0.94	0.96	0.97	0.98	0.98	0.99	0.00
8	0.00	0.00	0.65	0.65	0.79	0.86	0.90	0.91	0.94	0.95	0.97	0.98	0.98	0.98	0.00
9	0.00	0.00	0.61	0.61	0.77	0.84	0.89	0.90	0.93	0.95	0.96	0.97	0.97	0.98	0.00
10	0.00	0.00	0.57	0.57	0.68	0.79	0.84	0.89	0.92	0.94	0.96	0.97	0.97	0.98	0.00
11	0.00	0.00	0.52	0.52	0.65	0.77	0.82	0.88	0.91	0.93	0.96	0.97	0.97	0.98	0.00
12	0.00	0.00	0.48	0.48	0.61	0.74	0.80	0.87	0.90	0.93	0.95	0.96	0.96	0.98	0.00
13	0.00	0.00	0.44	0.44	0.57	0.72	0.78	0.86	0.90	0.92	0.95	0.96	0.96	0.97	0.00
14	0.00	0.00	0.39	0.39	0.54	0.69	0.76	0.85	0.89	0.92	0.94	0.96	0.96	0.97	0.00
15	0.00	0.00	0.35	0.35	0.50	0.62	0.74	0.80	0.86	0.89	0.92	0.94	0.94	0.97	0.00
16	0.00	0.00	0.31	0.31	0.46	0.59	0.72	0.78	0.85	0.87	0.91	0.93	0.93	0.97	0.00
17	0.00	0.00	0.26	0.26	0.43	0.56	0.70	0.76	0.84	0.86	0.90	0.93	0.93	0.97	0.00
18	0.00	0.00	0.22	0.22	0.39	0.52	0.68	0.74	0.82	0.85	0.90	0.92	0.92	0.96	0.00
19	0.00	0.00	0.18	0.18	0.35	0.49	0.66	0.72	0.81	0.84	0.89	0.92	0.92	0.96	0.00
20	0.00	0.00	0.21	0.21	0.32	0.46	0.59	0.70	0.77	0.83	0.86	0.91	0.91	0.95	0.00
21	0.00	0.00	0.18	0.18	0.28	0.43	0.56	0.68	0.75	0.82	0.85	0.90	0.90	0.95	0.00
22	0.00	0.00	0.15	0.15	0.24	0.40	0.53	0.66	0.73	0.81	0.84	0.90	0.90	0.94	0.00
23	0.00	0.00	0.13	0.13	0.21	0.36	0.50	0.64	0.71	0.80	0.83	0.89	0.89	0.94	0.00
24	0.00	0.00	0.10	0.10	0.17	0.33	0.47	0.62	0.69	0.79	0.82	0.89	0.89	0.93	0.00
25	0.00	0.00	0.20	0.20	0.21	0.30	0.44	0.56	0.68	0.73	0.81	0.86	0.86	0.93	0.00
26	0.00	0.00	0.20	0.20	0.19	0.27	0.40	0.54	0.66	0.71	0.79	0.85	0.85	0.93	0.00
27	0.00	0.00	0.20	0.20	0.17	0.24	0.37	0.51	0.64	0.70	0.78	0.84	0.84	0.92	0.00
28	0.00	0.00	0.19	0.19	0.14	0.20	0.34	0.48	0.62	0.68	0.77	0.83	0.83	0.92	0.00
29	0.00	0.00	0.19	0.19	0.12	0.17	0.31	0.46	0.60	0.66	0.76	0.82	0.82	0.91	0.00
30	0.00	0.00	0.20	0.20	0.20	0.21	0.28	0.43	0.52	0.64	0.73	0.80	0.80	0.62	0.00
31	0.00	0.00	0.20	0.20	0.20	0.19	0.25	0.40	0.49	0.62	0.72	0.79	0.79	0.61	0.00
32	0.00	0.00	0.20	0.20	0.20	0.17	0.22	0.38	0.47	0.60	0.70	0.77	0.77	0.60	0.00
33	0.00	0.00	0.20	0.20	0.19	0.15	0.19	0.35	0.44	0.58	0.69	0.76	0.76	0.59	0.00
34	0.00	0.00	0.20	0.20	0.19	0.13	0.16	0.32	0.42	0.56	0.67	0.75	0.75	0.58	0.00
35	0.00	0.00	0.20	0.20	0.20	0.20	0.22	0.30	0.39	0.55	0.63	0.74	0.74	0.57	0.00